This file is part of the following reference:


Access to this file is available from:

http://eprints.jcu.edu.au/11908
Chapter Three

SCIENTIFIC IN(TER)VENTION: FORMING THE SAVAGE

In Torres Strait we were continually meeting with instances which illustrated the powers of the natives in this respect. Nearly every detail of landscape and seascape had its special name and nearly every species which the zoologist or botanist would recognize [sic] as distinct was also differentiated by the native and had its distinctive name.... Minute distinctions of this sort are only possible if the attention is predominantly devoted to objects of sense, and I think there can be little doubt that such exclusive attention is a distinct hindrance to higher mental development.... it is natural that the intellectual superstructure should suffer. It seems possible also that the over-development of the sensory side of mental life may help to account for another characteristic of the savage mind.

(Rivers, 1901, pp. 44-5)

The texts of the Cambridge Anthropological Expedition to the Torres Strait represent a very different site of investigation from those of the missionaries. These are the texts of academic scholars. Their reports are based on scientific analysis of data collected from their observations, testing and interviews of the Torres Strait Islanders themselves. Because the collection and analysis of the data adhered to the underlying principles of scientific method, the Cambridge Reports carry the expectation that any bias or self-interest would be, at the very least, acknowledged and articulated and, at the most, eliminated as much as possible via the methods used in constructing tests, analysing data and drawing conclusions. The use of these techniques should lead to an expectation that the representations of Torres Strait Islanders in these reports are ‘accurate’ and ‘objective’ representations of who and what Islanders were at the time of the expedition.
A superficial reading of the texts may well confirm for the scientific and scholarly community the validity of much of the contents of these volumes. In such a reading, any inconsistencies perhaps would be understood in the historical context of the expedition. This was an expedition of ambitious proportion and logistics, an expedition at the cutting edge of new scientific disciplines and knowledges emerging at the turn of last century, namely the social sciences. It challenged the boundaries of what was already known and understood about ‘primitive’ people. It stands as one of the most comprehensive attempts to document the lives and characteristics of a society of people before the onslaught of colonial expansion changed them forever and before their previous skills and knowledge were lost to the world.

These texts represent a different site in another sense. Unlike the missionaries, the scientists did leave. They were present in the Torres Strait for only a few months. The six volumes of their reports took decades to publish - 1901, 1904, 1907, 1908, 1912, 1935. Until recent years, few Islanders would have been able to access them and whilst many authors on Torres Strait issues (e.g., Beckett, 1987; Singe, 1989; Sharp, 1993) make reference to their contents, there is no direct evidence of any material effect of this writing on the lives of Islanders. That is, unlike the interventions of missionaries and governments, the scientists of the Cambridge Expedition had no interest in changing the lives of Islanders. Although they claimed that their Reports may be of later use by others in managing the changes in the Torres Strait (Haddon, 1935), in the early historical documents relating to the management of Islanders (e.g., Bleakley, 1961) there is no evidence that any understanding of the Torres Strait Islanders was sourced to the Cambridge Reports.

If this is the case, why then present these texts as a valid site of invention and intervention - in(ter)vention. There are a number of reasons. Firstly, because now, more than ever, they are referred to by authors writing on the Torres Strait (Singe, 1989) as a source of history and as an authority on what
Islanders once were and the way they once lived. Secondly, because now, more than ever, these Reports are accessible to Islanders. For Islanders interested in their history they provide details now lost to many Islanders – from the genealogies which help Islanders trace their connections to each other and past generations, to the descriptions of past practice and customs that provide an understanding of tradition and heritage, and to the linguistic studies that provide insights into languages spoken a Century ago. Thirdly, in light of the above reasons, it is important for Islanders to have a measure of the significance of these Reports both to their own and to others’ understanding of Islanders’ past and present and how the position of Islanders has been given representation in academically authoritative texts. Fourthly, and most importantly for the purposes of furthering this thesis, the analysis of these texts holds particular significance for understanding the position of Islanders if it can be used to explicate how the forms and processes of the scientists’ rationale and methods provided the conditions and the limits of how Islanders could be understood both historically and in the present.

This chapter, then, attempts to provide more than a superficial ‘within discourse’ analysis of the content, methods and conclusions of the Cambridge scientists. Its aim is to analyse these texts to provide a reading of how the position of Islanders has been framed, pre-conditioned and subsequently described, explained and understood by a scientific community of scholars. It aims to illustrate how these pre-conditions infiltrated and shaped the scientist’s interpretation of data and how this circumscribed and limited the conclusions they were able to draw. It seeks to do this in order to pursue the following questions. How did these scholars view and give representation to the position of Islanders in the context of the historical events that surrounded the emergence of the new order? How reflective of the Western systems of knowledge were these observations, conclusions and representations and how did they represent Islander understandings of knowledge? As an exemplar of the application and production of scientific
knowledge and processes, are the scientific ways of observing, understanding, relating and categorising Islanders that are evident in these historical texts of the Cambridge reports, carried over into current methodologies for understanding, explaining and constructing knowledge on Islanders? What does an Islander need to understand about these texts and their methodologies in order to measure how such texts contribute to understandings about the current position of Islanders, particularly in relation to the ongoing intervention of Western systems of knowledges in their lifeworlds? Can these texts be sanctioned as 'authoritative' merely because they employed scientific methods assumed to be objective and free of the bias of the researchers? Should it be accepted that the diminution of the Torres Strait Islanders as expressed in these Volumes is an outcome of those particular historical times in which the scientists were embedded? Or should the sciences be scrutinised further for the epistemological constraints that precondition the interpretative frameworks through which they frame their knowledge production? What can Islanders learn from this exemplar of scientific practice and knowledge production about the positioning effects of current knowledge production on Islanders?

These questions are of the utmost importance to understanding both the historical and the current position of Islanders. As argued in Chapter One, Islanders own independent representations of their historical (and ongoing) experience are easily invalidated. Islanders' own historical understandings have been denied and refused and have been re-presented in the knowledges and understandings of non-Islanders. The position of Islanders cannot be fully articulated without reference to this body of knowledge as it appears in Islander lifeworlds in forms of intervention that have produced and still produce particular material effects and particular political positions for Islanders. Although the Cambridge Reports may have had limited material effects, they stand as an exemplar of knowledge production on Islanders. For this reason they present as an important site for study.
The most crucial goal of this study is to rediscover the ways in which non-Islanders have positioned Islanders in their texts. The attempts of the Cambridge scholars to chart the characteristics of the Islander were as noble in their intentions as were the missionaries. I have not set out to disprove their 'truths', nor to invalidate the contents, or construe the Reports as outdated or misguided. What I hope to show is the fragility of the grounds on which their 'truths' and statistics stand. In this way I wish to uncover the particular historical grounds and the particular epistemological position which constrain these Reports as the Cambridge team went about constructing a particular historical position for the Islanders they studied and from which they are still viewed.

The Cambridge Expedition

The Cambridge expedition was stimulated by earlier ethnographical data gathered by A. C. Haddon in 1888 on his first visit to the Torres Strait as a marine zoologist. The project for the following expedition was, according to Haddon, "to collect more data, with a view to making, with the aid of colleagues, as complete a study of the people as was practicable" (1901, preface). He argued that "no investigation of a people was complete that did not embrace a study of their psychology, and being aware of the paucity of our knowledge of the comparative physiology and psychology of primitive peoples" (preface) he determined that a team of psychologists be part of the expedition. Drs. W.H.R. Rivers, C.S. Myers, and W. McDougall, all trained in experimental psychology, were recruited to study the physiology and psychology of the Islanders. Sidney H. Ray was also recruited to document the two traditional languages of the Torres Strait. Mr. A. Wilkin who had some background in archaeology and anthropology was also recruited. Dr. C.S. Seligmann assisted with his special interests in exotic diseases and native medicinal practices. Haddon himself had not only a renewed interest in ethnology but had resigned his chair of zoology, and by the time of the expedition he was mostly preoccupied with anthropology.
On their arrival in the Torres Strait in 1898, the seven-member team found things had already changed for the Islanders. The people had been adversely affected by a burgeoning marine industry. The Bêche-de-mer (sea cucumber) and the Mother of Pearl shell had attracted a lot of people with financial interests who were single-minded about the exploitation of the marine resources as well as the exploitation of Islanders as cheap labour. In the Eastern region of the Torres Strait where the Islands were more isolated, missionaries from the London Missionary Society in England had control of the communities and had inculcated Islanders into a new moral order. The Queensland Government by this time had also stepped in to ‘regulate’ disorder in the commercial activity and to ‘protect’ the welfare of all Islanders in the Torres Strait including those under missionary control. The Islanders, then, found themselves invaded from many quarters and overwhelmed by the different regimes and new forms of regulation (the following Chapter will explore these regimes and their different modes of intervention in more depth).

The project for the expedition thus came to have a renewed purpose. The Cambridge research team was now “to recover the past life of the islanders [sic], not merely in order to give a picture of their former conditions of existence and their social and religious activities, but also to serve as a basis for an appreciation of the changes that have since taken place” (Haddon, 1935, p. xiv). The ‘native languages’, the ‘primitive psychology’, as well as the ‘traditional culture’ became obvious priorities for the team. The new sense of purpose required of them concentrated efforts to extricate and describe what constituted the Islander before the arrival of the marine industries, government agencies, and missionaries. The work was to be done with the view that what was documented was to be of later use by others in order that they gauge and manage the changes in the Torres Strait. The expedition thus gained its first political overtones albeit after the research team had arrived in the Torres Strait. But what was also clear was that the project was not about assessing the impact made by intruders from the West on Islanders. Nor was
it about documenting the damage done to whole communities by the West’s incessant pursuit of material wealth.

Two points can be made about the terms of reference that the team established at the outset of the study. First, the Cambridge scientists embarked quite openly on a comparative study. In charting the characteristics of the ‘savage mind’, the team proposed to achieve this by directly comparing Islanders and Europeans on a broad range of tests. Sometimes they cross-referenced their data with knowledge gleaned from other studies of different groups before drawing their conclusions. By this process the scientists did much more than describe and report on the characteristics of Islanders and their society. They inscribed the Torres Strait Islander in a particular, and already prescribed relation with Europeans. It is this action and the subsequent relation that it engendered at the epistemological level that limits understandings about Islanders and the position that was constructed for them.

The second point concerns the way the Cambridge scientists viewed the historical position of the Islanders. They had difficulty viewing the Islanders as people embedded in their own historical context and trajectory. That is, the scientists submerged the dynamics of Islander society that resulted from their inter-island relationships and from their interactions with neighbours to the north and south, and their contacts with Western travellers that had been recorded at least since 1606. According to Stokes (1846), the earliest visit to the Islands was made by Luis Vaez de Torres in July 1606, at least 290 years before Haddon and his team arrived in the Torres Strait. According to Haddon’s own review of the literature (1935) on early explorers there were many other visits by numerous seafaring explorers. Carstensz came in 1623, Abel Tasman in 1644, James Cook in 1770, William Bligh in 1789, E. Edwards in 1791, W. Bampton and M.B. Alt in 1793, Matthew Flinders returned for a second visit in 1802, P.P. King came in 1819, Young in 1822. Charles M. Lewis sailed into the Torres Strait in 1836 to search for survivors
of the ill-fated Charles Eaton. By the 1830s, the Torres Strait had become a major gateway to Eastern Australia for travellers and voyagers from Western countries. And because of this, major hydrographical surveys (Jukes, 1847a, 1847b; MacGillivray, 1852a, 1852b) were commissioned by colonial governments in Australia and abroad to chart safer passages through the Strait. The survey ships MHS Fly and the HMS Rattlesnake spent many months in the Strait and had become well known to most Islanders. Despite these visits and interactions, like the missionaries, the scientists saw Islanders as people who had “remained the same” (McFarlane, 1888, p. 14), whose historical path was only just beginning because of the infiltration of the current wave of European activity.

The Haddon accounts contain an example of how easily the Islander position can be refused and written out of history and it is presented here to illustrate the process and to clarify the significance of this practice for understanding the position of Islanders. When the sailors of the Hornezer and Chesterfield arrived in the Torres Strait in 1793, the Islanders of Erub (Darnley Island) welcomed them. The sailors were invited to help themselves to the island’s only source of water (as they reportedly did with all potential traders; see McFarlane, 1888). The sailors not only filled the ships’ many barrels but also indulged themselves by bathing in the water hole with soap, and then proceeded to wash the ships’ laundry as well. Water is extremely precious to Islanders in this region of the Torres Strait, and according to McFarlane (1888), Erub was often without rain for eight months of the year. The conflict that ensued as a consequence of their misunderstanding saw five sailors killed as well as an “unknown” (Haddon, 1935, p. 6) number of Islanders.

Haddon’s recount of this event understandably centred on the ferocity of the encounter between the Islanders and sailors. The actual number of sailors killed was recalled and the destruction of the material possession of the Islanders was listed: one hundred and thirty-five houses were destroyed,
sixteen canoes were burnt, and all the gardens were decimated. But, the number of young girls 'taken as prisoners' and the number of Islander deaths remain in his recount as, 'unknown'.

This recount appears as containing a simple omission of the Islanders' position. The omission seems understandable because the incident was recounted from the visitors' point of view, how could they be sure of numbers. It appears easily remedied because although the numbers of Islanders killed and taken away can never be retrieved a more balanced account can still be rewritten to include the Islander position. But from the Islanders' position this is much more than omission. This represents the denial of their significance. The repetitive, almost endemic nature of such omissions is not so easily remedied by attempts to re-vision history to include Islander positions. The cumulative effect of re-writing history to include Islander positions does not add up to a more balanced historical account of the experiences of Islanders. If the historical experience of Islanders has been one of constant denial and refusal then it is this that must be written into Islander history. The effect of this historical experience on Islanders' current position needs to be more clearly understood and articulated within the historical context of non-Islander intervention. The remedies to this historical experience of refusal lie not so much in re-writing the past, although that has enormous therapeutic value. It lies as much in understanding the processes that give form to such refusals, that render them so logical, that render it natural to not even think of the Islanders' historical position, and that lead to obscuring Islander standpoints in history. It is from this standpoint that the analysis of these texts is informed. And it is from this standpoint that Haddon's view of Islanders as having only a recent past is untenable. It is from this standpoint also that in order to begin understanding Haddon's and his team's view of Islanders it has to be understood that from the outset Islanders could only constitute a secondary position in relation to those who studied them. And, as well, that Islander histories when they are
considered can emerge only in the secondary sense as an ‘unknown’ and untold appendage to the Western histories.

As we will see in the following sections, the standpoints and approaches used in the Cambridge project held that Islanders' lifeworlds were in a primitive state (i.e., with no political space of their own, going no place in particular, and thus with no history they could call 'their own'). Islanders featured as an unorganised lot with ad hoc lifestyles, living from day to day. And as we saw in the previous Chapter, according to non-Islanders like Rev. McFarlane (1888), the persistent standpoint was that the Islander up until the arrival of people from the West had quite simply 'remained the same'.

1. Modern Linguistics: Charting languages without their speakers or their history.

Sidney H. Ray's (1907) volume (III) on linguistics purports to describe in depth the formal aspects of the traditional languages as they were spoken in the Torres Strait in the late 1800s. It spans 528 pages, and considers the languages of the Eastern and Western Islanders, the languages of Cape York, and the southern languages of Papua New Guinea. In this section, I will chart Ray's overview of the literature in addition to his work on the traditional languages to provide readers, and particularly Islander readers, with a historical perspective on the extensive deliberations he had to make to put his case that Islander language formation was static. This method is chosen to show not only an historical moment that surrounds such efforts but to show that even after the most extensive reviews and considerations of the literature and the grammar of the languages, the Western theoretical principles regarding 'primitives' prevail. And once again we see that the political position of Islanders in the formation of their language does not figure in any significant way.

At first glance, the extensive descriptions of the grammar of the Islander languages are impressive but unremarkable. However, linguists do have a
location in History that helps set parameters to what they can do. Two important aspects of the historical moment need outlining. First, the period up until Ray’s time was notable for major scientific explorations around the Globe. The trends to scientifically taxonimise all aspects of ‘difference’ had great intellectual currency, especially if such differences could be compared on an evolutionary scale. It is clear, for instance, that Sidney Ray’s study (1898-1907) was mostly centred on capturing the formal elements of the grammar of the two traditional languages of the Strait. But, his standpoint in History is also clear when he begins to propose the notion that maturation stages in the grammar of a language can be used to compare it with another:

“[a]lthough a morphological likeness between the languages of Papuans or Andaman Islanders [the nearest black race west of New Guinea, as Ray referred to them] cannot at present be satisfactorily demonstrated, it seems to be at least possible that as the two races are in practically the same stage of culture, the psychology of their languages may be found on closer knowledge to have some common features” (p. 525).

However, it was after Ray’s (1907) publication, and not until Ferdinand de Saussure’s efforts between 1906 and 1911 that a scientific basis was fully established that could possibly locate psychology in linguistics. In other words, comparing the psychology of languages at the time of the expedition was only being speculated about.

Second, Ray (1907) undertook his study of the two traditional languages of the Torres Strait at a time when there were major theoretical shifts being made in the study of languages. Up until then there had been two clear positions on linguistics: Grammar and Philology. Grammar, at the initiation of the Greeks and later taken up by the French, was a preoccupation oriented to the formal elements of a language, and was heavily reliant on the logic of grammatical rules to elaborate about the use and misuse of a language. As such, it became a very prescriptive discipline. Philology, on the other hand,
was oriented to written texts and not the language used in daily discourses. The main preoccupation was largely with literary histories, and mostly on forms and styles of writers over different periods with criticism at the centre of its discipline. By the early 19th Century however, there had been a realisation in linguistic studies that languages could be compared. According to Saussure (1972), “[w]hat was new was the elucidation of one language by reference to a related language, explaining the forms of one by appeal to forms of the other” (p. 2). Those who then proposed that a language could be compared with another looked towards the ‘living language’, and subsequently moved to develop standpoints that became known as comparative grammar and comparative philology.

Comparative philology continued its earlier stand on styles and the focus was clearly on the ideological creativity of language as used in speech acts. Language to these comparatists – theirs was a position borne out of preoccupations with Indo-European languages - was the creative work of individuals who sought to express themselves in stylistic ways. The history of its creation thus was seen as ideological - in the sense that language was seen as the manifestation of negotiated settlements between creative speakers - always in the making, and of changing forms. No primacy was given to languages as having a fixed normative system. Verbal expression - a creative speech act - is what manifests language. To the philologists, everything that was considered by linguists as grammar in a language was once an encounter of speakers stylistically expressing their tastes. As one Russian reader observed of extant trends, this approach was based on the notion that “[t]he reality of language is, in fact, its generation” (Volosinov, 1973, p. 56).

By contrast, those oriented to comparative grammar continued the earlier priority to phonetics, grammar, and lexical forms. These grammarians argued that verbal interaction, on the surface, may be seen as though they were in the process of language encounters of the aforementioned kind. But, underlying all forms of verbal expressions were elements that provided for
correspondence between speakers. How else would there be coherence between speakers, they asked? Coherence in communicative events, they contended, comes about because they are aligned by elements of phonetics (familiar sounds), grammar (recognised ways of making meaning), and lexical forms (a shared vocabulary). Language, seen in these ways, corresponded with a normative system borne out of communal usage – an agreed system of ways to structure and make common meanings. The living language to grammarians was seen to be embedded in “a stable, immutable system of normatively identical linguistic forms which the individual consciousness finds ready-made and which is incontestable for that consciousness” (Volosinov, 1973, p. 57). Not, they argued, in some contortion of some ideological creativity. In short, grammatical features of a confined linguistic system to them not only determined but also delimited forms of communication between speakers.

Comparative philology, according to the grammarians, failed to connect languages by their formal systems and linguistic components. They argued that styles and creativity in language may be useful to identify its forms but that there are no natural elements or artistic impulses beyond the formal rules of grammar. According to Volosinov (1973), this was a period that saw linguists arguing that “[t]he laws of language are the specifically linguistic laws of connection between linguistic signs within a given, closed linguistic system” (p. 57). Comparative grammar, according to philologists, developed modes of investigation that failed to connect languages by the history of their making. As the philologists pointed out, what is not often stated is that a fundamental purpose to the linguists’ work on grammar is to abstract it from its ideological beginnings so that languages can be ‘formalised’ for the specific purpose of teaching language as a ready-made product, and according to some fixed system. To the philologists, the grammarians’ central problem was their exclusive focus on the formal elements of a language, and in particular their failure to include the ideological histories that gave grammar its forms.
Ray (1907) was confronted with a theoretical standpoint based on a normative system of phonetic, grammatical, and lexical forms as the basis for describing languages on the one hand, and on the other he had the philologists pointing to instances and thus ‘facts’ in communicative events as theirs. Such positivism – the use of ‘facts’ as a basis for its standpoint - evident in the comparative work of philologists did not sit well with Ray (1907). Saussure’s (1972) illustration of an early aspect of the positivism in the philologists’ newfound schema is helpful here to bring forward Ray’s attempt to distance himself from positivist traditions:

For example, suppose we take the paradigms of Latin *gens* and Greek * geniş*:

*gens*, *genesis*, *gene*, *geneva*, *genomen*, etc.
* geniş*, *géniös*, *géni*, * génës*, * génëw*, etc.

These series of forms tell us little, either on their own or when compared with one another. But they tell us a great deal as soon as we set beside them the corresponding Sanskrit forms:

* gánas*, * gánasas*, * gánasi*, * gánassu*, * gánasam*, etc.

At a glance we now see the relationship between the Greek and Latin paradigms. On the hypothesis... that Sanskrit * gánas* represents the primitive form, one concludes that *s* fell in the Greek forms * génësös* etc. wherever it occurred between vowels. A further conclusion is that under the same conditions *s* became *r* in Latin. Moreover, as regards grammatical analysis, the Sanskrit paradigm makes it evident that the stem of these forms is the stable and clearly isolable element *ganas*.

Only early Latin and early Greek ever had the primitive system preserved in Sanskrit. So it emerges that the maintenance of Proto-Indo-European *s* in all cases is what makes Sanskrit illuminating in this instance. It is true that in other respects Sanskrit remains less faithful to the original prototype forms: it plays havoc with the original vowel system, for example. But in general the primitive elements which it maintains are vital for purposes of reconstruction. (Saussure, 1972, p. 2)
To the early philologists, the nature of the phonetic features of words and their changing forms were "diachronic facts" (Saussure, 1972, p. 91). The approach to establishing connections between languages thus was reliant on nothing more than the emergence of forms and styles of words: the $s$ in the original word 'fell' in Greek because they emerged between vowels, and $s$ turned to $r$ in Latin for the same reason. This was very much a view to a history of languages where a central source was assumed, and where variations in the formation of similar words were seen to appear 'over time' as well as in 'their transference' to different geographical locations. So, the creative convergences of 'primitive' elements in a root word if not the geographical variation to the phonetics of a changing word were the 'facts' needed to establish connections.

However, the following synopsis of theoretical standpoints by Sidney H. Ray (1907) suggested that his approach to linguistic studies was not sympathetic to the early comparative work on like-words or their changing phonetic appearances. He argued that connecting languages by linking similar words or sounds of words was not only absurd but that the early comparativists assumed an equally ridiculous position that languages evolved across the globe genealogically from sources in countries to the West. He wrote, for example, of the same kind of practices in the Australian literature, "[t]here is a tacit supposition in all the foregoing theories that the Australians are immigrants from some unknown place into the lands which they now occupy" (1907, p. 516). He went on to show in the literature on Oceanic languages (Australia, Papua New Guinea, and the Pacific Islands) how inappropriate this practice had become:

In 1885 Tregear endeavoured to prove an Aryan origin for the Maori of New Zealand by a method, which by *reductio ad absurdum*, Atkinson [1886] showed would equally prove their kinship to the Semitic or any other group of languages. McDonald in several books [1894, 1889] has seriously tried to prove that the Melanesian languages are dialects of an ancient Semitic tongue. Hill-Tout [1898]
and Campbell [1899] have affirmed a connection between Oceanic and the American languages of British Columbia and Yucatan. F. W. Christian [1898; 1899] has compared Oceanic words with Aryan, Ural-Altaic and Eskimo, and with Japanese. Curr [1886] found that 'affinities in manners and customs demonstrate unmistakably that the Australian and the Negro are related, and also finds affinities in their languages. J. Matthew [1899], in discussing the origin of the Australians, finds traces in their languages of Dravidian, Melanesian (called by him Papuan), and Malay words. Dr. J. Fraser [1893; 1892] of Sydney has tried to prove that Aryan roots are found in Melanesian and Australian languages. As he also finds the same in Dravidian, and occasionally in Semitic, it naturally follows that according to his view, all these languages have a common origin. (Ray, 1907, pp. 504-505)

This led Ray to conclude that "[m]any who have discussed the subject, and some Australian writers in particular, appear to have followed each his own fancies as to origin and relationship, and, with no accurate method of comparison, obtained results which are at once confusing, contradictory, and in some cases absurd" (1907, p. 504). One of the primary faults Ray (1907) identified with past works on Oceanic languages, the same one raised by grammarians about positivist traditions, is that they:

... base their arguments upon supposed glossarial affinities. They believe that a likeness of words in sound and meaning is a proof that the languages in which the words occur are of common origin or genealogically related. Their method consists in taking some word or words in one group of languages, then to suppose some phonological changes which may or may not take place according to [?] rule in the languages discussed, next to find some words similar in sound and meaning to the altered words in the first group of languages, and then finally assert positively that the two sets of words are related. (Ray, 1907, p. 505)

In using this method, the aforementioned authors have come up with:
...three different propositions with regard to Australian languages. 1. They are related to the African (Curr). 2. They are related to the Polynesian, Melanesian, Dravidian, and Aryan (Fraser). 3. They are related to the Malay, with resemblances in Semitic (Mathew). Since, also, by the same methods, MacDonald affirms the Melanesian to be Semitic, and Hill-Tout relates some American languages to the Polynesian, and the Polynesian (represented by Maori) is Aryan according to Tregear, it necessarily follows that all these forms of speech are related to one another, and this process may be used to prove any given language to be connected with any other given language. (Ray, 1907, p. 506)

Ray (1907) queried why it was so important to prove that the first Australians were migrants. As he contended, “[t]here seems to be no more difficulty in assigning a distinctive character and local origin to the languages of the Australian aborigines [sic], than there is in assigning a special character to the fauna and flora of the land they dwell in” (p. 516). Why not consider at the outset that the people belong to this continent, Ray asked? Why not accept first, and before thinking about comparisons, that the languages of people in these parts of the world have their own beginnings?

By basing the early comparative work exclusively on sounds of words and 'like' words, Ray pointed out that their approach was not only too narrow but failed to see any of the developing elements of grammar in native languages. To establish connections, he contended, modern linguists needed a theoretically grounded approach to what makes languages peculiar to a community of speakers. Modern linguistics needed to adopt the standpoint that “[t]he process by which a thought is expressed in a language and the changes of form or position by which the words in a sentence are fitted to one another, are the only safe guides in establishing the connection of languages” (p. 507). The stage of development in the grammar of a language, for Ray, had to be identified and fully understood. Once a language was known in these ways he claimed, comparisons with another could then be
contemplated. He thus moved to provide the following examples to demonstrate the "true principles upon which linguistic comparisons can be made" (p. 507):

There can be no relationship in the speech of the Murray Islanders who says, Nako ma-na nei? (What thee-of name), of the Banks Island Melanesian who says, I-sei na-sa-sa-ma? (Person-who the-name-thy), or the Hindu who says, Ter⇔ky⇔n⇔m hai? (Yours what name is). But the language of the Micronesian who says, Ia i-to-m? or Ia a-to-m? (Who (is) name-thy) uses exactly the same formula of words as the Loyalty Islander who says, I↑i↑i↑-m? and we may regard them as related to one another just as the Solomon Islander who asks, A-hei na aha-mu? is speaking a language akin to that of the Fijian who asks, O d'e i na yad'a-mu? (Person-who the name-thy), identical in construction with the expression of the Banks Islander just given. (Ray, 1907, p. 507).

Ray (1907) qualified this however by noting that "a similarity of structure is not evidence of linguistic connection unless there is also an identity of formative particles" (p. 507). He subsequently moved to provide the following example:

The Turkish words el-in, el-e, el-don are translated exactly by the Miriam [Mer Islander] tagn-a, tag-on, tag-lam, or the Mabuaig geta-u, geta-ka, geta-ngi (of hand, to hand, from hand), but there is no connection between the languages. But when, as in the words given above for 'name-thy', the Banks Islander says sasa-ma, the Micronesian to-mor a-to-m, the Loyalty Islander i↑-m, the Solomon Islander and Fijian aha-mu and yad'a-mu, and it can be shown by comparison with languages spoken between them that not only are sasa, ito, ato, i↑, aha, yad'a, related words for 'name', but that the same suffix -mu, -m, -mu is used in these, and in the languages between, we may safely assume that we are dealing with related languages. (Ray, 1907, p. 507)
The principal features to making connections for Ray required the consideration of root words, the formative particles used with them, as well as the effects they had on meaning when words and particles were compounded (what he termed as 'word-building'). This approach, to Ray, required no less than a close examination of all the grammatical features that provided the basic structure to the traditional languages in the Torres Strait. He considered in his study, for example, the formation of demonstrative words and particles in the Islander languages, the place and form of adjectives, nouns, pronouns, the use and effects of verbs, adverbs, connectors, etc. as well as the forms and use of exclamations and numerals. As stated by him, documenting and assessing the stage of development of the grammar in a language was the only safe means to establishing whether there were connections with another.

As far as knowledge only of lexical forms goes, Ray (1907) had this to say:

The witness of vocabulary is entirely of a secondary character. The evidential value of words in a given language which are similar in form or meaning to those in another language, depends upon circumstances of the connection. If the languages in question are already proved akin by identity of grammatical construction and by identity of particles, then an agreement in words strengthens the argument for kinship. (Ray, 1907, p. 507)

He went on also to point out that the geographical and historical factors used by others in establishing language connections may not be as sound as they make it out to be:

There is a geographical factor in comparisons which depends on the contact, for trading purposes or by contiguity of settlement, between the speakers of the languages compared. This, though valuable as evidence of the amount and nature of the contact, is of no value for establishing theories of origin and descent. A historical factor depending upon the introduction of a new religion or higher stage of culture is equally useless. (Ray, 1907, p. 508)
Ray (1907) maintained that the process by which speech acts are formally structured and expressed in a language, and particularly their stage of development in grammatical terms, are the only primary organising principles by which language connections can legitimately be made. Isolated cases of a similar word or words appearing in different languages, as far as he was concerned, did not prove language connections. The priority evident here was for a more extensive consideration of grammatical features and syntactical rules. What was crucial to Ray’s approach was the view that a language had to be treated, at the outset, as a static entity in a temporal space, contextualised only by its grammatical rules. In other words, connecting languages linguistically affords no view to ideological creativities and thus no view to a history of language. Just as Ray queried the early enterprise of basing connections exclusively on the style and sound of words, and particularly for not factoring in at least some position on the formal aspects of a language, so in turn one needs to question his own method of giving exclusive attention to the charting of developments in grammatical rules and structures without including the people in the making and remaking of their language.

Ray’s (1907) review of extant practices in the literature, gives no priority to any ideological position in language formations. Grammar was at the centre of his consideration in the literature. Ray considered accounts from as early as Cook’s voyage in the Endeavour in 1770 as well as Edwards’ voyage in the Pandora in 1791. He found that the early authors neither “left accounts of the natives [n]or their languages” (p. 1). He noted that it was not until the arrival of Matthew Flinders in 1792 that focused descriptions were first made of the Islanders. Flinders, on a second visit to Mer in 1802, described an encounter with Islanders and referred to them as “... ‘Indians’... holding up cocoanuts [sic] joints of bamboo filled with water, plantains, bows and arrows and vociferating toore! toore! [iron! iron!]” (Ray, 1907, p. 1). Around the same
time, Signor L. M. D’Albertis’s (1880) documented a visit to the Torres Strait. His account “contain[ed], among others, a vocabulary of 38 words used in Yorke Island [Masig]” (Ray, 1907, p. 4). Ray also found an account by Stone (1880) of a visit to Papua New Guinea in 1876. Included in Stone’s account is a discussion of a list of words from the language used at Masig. According to Ray, however, it did not appear that Stone actually travelled to the Strait. Likewise, in another publication, Herr Grube (1882) “made a re-arrangement of the Murray [Mer] and Darnley [Erub] Island vocabularies of Jukes and Stone, without adding to a knowledge of the structure of the languages” (p. 4). Typical of documentations in the early periods of visits to the Islands a few Islander words emerged here and there but they were mostly written up as words for artefacts of exotic worlds.

Ray went on to note that it was around 1822, on a visit to Mer, that a surgeon, T.B. Wilson, on the ship Richmond, compiled a vocabulary that was subsequently lost in a shipwreck in 1829 on another visit to the Torres Strait. By 1837, concentrated attempts were being made to identify the language. P. P. King (1837) had produced from Captain Lewis’s journal of the rescue of Ireland a substantial list of words from Mer: “532 English words or phrases with native equivalents, 13 names of islands, 7 numerical terms, and 40 names of parts of the body” (Ray, 1907, p. 2). These words and phrases were documented by Captain Lewis from John Ireland (a survivor of the shipwreck ‘Charles Eaton’ who had been living on Mer for two years). In 1847, Jukes, a naturalist, published A Narrative of the Surveying Voyage of HMS ‘Fly’ (1847). In this publication, Ray noted that 800 words from Mer and Erub were included. A Mr Millery, the clerk of the ship ‘Fly’, had compiled them.

Listed in the appendix to the Narrative of the voyage of HMS ‘Rattlesnake’ (1852) published by MacGillivray, also a naturalist, are two sets of vocabularies. The first was compiled from the language spoken by the Cape York people and the Muralag people and the second, to the language spoken in the “South Eastern New Guinea and the Louisades” (Ray, 1907, p. 3). But, as Ray pointed out, the former vocabulary:
... was almost entirely derived from the communications of Mrs Thompson (Gi'om), a white woman who had been held in captivity by the islanders [sic] for more than four years... but Mrs Thompson's want of education prevented her from giving Mr Macgillivray anything but a superficial idea of the structure of the language. (Ray, 1907, p. 3)

As far as Ray (1907) was concerned, the more significant publications came about in 1876 when missionaries began translating religious texts into the local languages. For Ray, the religious literature was significant because they contained lengthy representations of the traditional languages of the Torres Strait, and of a kind hitherto unseen in the literature. They offered a better sample of the grammar of the languages. In the Eastern region of the Strait, most of the literature published was concerned with “Scripture Translations, Lessons and Hymns” (p. 226). And, as far as Ray knows, the “first mission literature was a sheet of lessons first used at Darnley [Erub] on Sunday, August 24th, 1873” (p. 3). After five years on Mer, Rev. S. MacFarlane published in 1876, in Meriam, the first book, First Lesson Book from Darnley Island, Torres Strait (cited in Ray, 1907). Rev. A. E. Hunt later revised this in 1888. Another first was the translation of the Gospel of St Mark into Meriam, Evangelia Mareko Detali, published in 1879 in Sydney. To Ray, this single publication unfortunately set a mode for abbreviated grammatical forms clearly evident in translations that followed. As he said of one of the translations, “it is certain that the translation [of the Gospel of St Mark] did not fully represent the exuberant grammatical forms of the Eastern Language” (p. 226). Nevertheless, Rev. J. Tait Scott published 34 parables in 1883 at Montrose (cited by Ray, 1907). Another that followed the order of the aforementioned mode, Evangelia Mareko Detarer, was published in 1885 in Sydney. This publication included translations of the “Gospels of Mark and John, with the Catechism, Lord's prayer, Commandments, Marriage and Burial Services and 112 hymns” (Ray, 1907, p. 227). By 1898, when Ray visited the islands,
Finau... was translating the Gospels of Matthew and Mark into the Murray language [Meriam] whilst Iotama... was translating Luke and John. These have been since published by the British and Foreign Bible Society, under the care of Rev. Harry Scott. (Ray, 1907, p. 227)

Ray also found in Rev. Dr. R.H. Cordrington's, The Melanesian Languages, published in 1885, a short list of words from Dauan and Erub. Cordrington had deliberated on the linguistic features of a few nouns from Meriam. A list of Islander words are also included in Forty Years' Mission Work in Polynesia and New Guinea by Rev. A.W. Murray (1876) and Life in the Southern Isles by Rev W.W. Gill (1876). Ray (1907) resolved however that, in the main, and “[i]n spite... of the large numbers of vocabularies, the grammatical structure of the two languages of Torres Strait was very little known” (p. 4). As far as he was concerned, the “former grammars (based on translations of the Gospels) had left many expressions to be elucidated and explained” (p. 5).

In the Western Islands, Ray (1907) outlines similar-writing activities. However, unlike those produced in the Eastern Islands, the locals and South Sea Islander linguistic neophytes had produced all the literature. In 1884, a Lifuan translated the Gospel according to Mark in the Saibai dialect of the Western language. In 1900 a Samoan, with the aid of Ned (Waria), Tom (Nobo), Peter (Papi), drew up in the Mabuiag dialect the Gospels of Matthew, Mark, Luke, and John. This too was published by the British and Foreign Bible Society in 1900. Ray noted that there was also a “new version of the Catechism and Hymn Book.... Kulai Iapupoibi, Jesun Wakei Judan A Jeovan Sabi. Naupuidaika.... [the] Hymnal portion has 82 pieces, some of which are prayers and exhortations rather than hymns” (p. 190). Ray resolved here, as he did with translation practices in the Eastern Islands, that the “language of the translation was in many respects much inferior to the language as ordinarily used by the older natives... the language had been for some years used and taught by white men.... as my informant Pasi described the process, 'they cut it short'” (p. 5).
By contrast, two manuscripts produced by Eastern and Western Islanders, Pasi and Waria, impressed Ray. As he exclaimed of Pasi's manuscript, "this may be regarded as the first unassisted literary effort of a member of the Papuan race" (1907, p. 228). In the Eastern Islander language, Pasi wrote an impressive manuscript of 59 pages written on both sides and included folktales, names of islands, villages, reefs, animals, plants, as well as songs. Extracts from Pasi's manuscript are included with English translations in Ray's volume from page 229 to page 250. Ray described Pasi's writing of "somewhat crabbed style" (p. 228) and that it also resembled the missionary modes of 'cutting it short'. But, and more importantly to Ray, this is where Waria's manuscript was different. Ray considered Waria's manuscript to be more 'true to form'. In his words, it was "longer and more purely native" (p. 228). Waria's manuscript of 281 pages was produced after Ray's project in the Strait, and later sent to the Cambridge Expedition team in England. Parts of the manuscript are included in Ray's volume from page 191 to page 225 with English translations. The full manuscript,

consists of 281 pages, partly quarto, partly octavo, [and] written on one side. The first 175 pages, after a short account of Waria himself, are taken up by a genealogical description of the people of Mabuiag. Then follows a series of Folk-tales comprising those of KUIAM (i.e. Kwoiam), pp. 176-212; WAAT, pp. 212-240; a short description of the funeral ceremonies, pp. 241, 242; TASEPA, pp. 243-257; AMIPURU, pp. 258-281. (Ray, 1907, p. 191)

Ray (1907) identified the form of writing chosen by Waria as the living language, or that used in day to day conversation. This was the aspect of the whole manuscript that interested him the most. To Ray, the style of writing was quite different from the translated literature produced by non-Islanders because it contained for him the more significant traces of a pre-given structure to the language and greatly assisted with his on-going study of the grammar of languages in Melanesia.
From his review of extant practices in the literature, however, Ray (1907) resolved that a more focused effort was needed in the gathering of data. What was needed was more evidence of the grammar of the traditional languages. Likewise, from his consideration of the theoretical trends, he resolved to centre his focus on analysing the Islander languages by their grammar. His approach to the study in the Islands was to collect as many language encounters from the Islanders as he could. It was through a very labour intensive process that Ray (1907) was able to put together with any certainty the grammar of the traditional languages as they were spoken in the Western Islands (see for example pp. 6-48) and the Eastern Islands (see pp. 49-87). He gathered statements used in day to day conversations and studied them individually for their grammar. From this, he was able to document a variety of ways of saying things. He checked and double-checked all of his data. He had his notes and descriptions checked not only by informants but also by the older members of the community. The assistance of the older members of the communities was particularly important to verify whether things said by informants were stated correctly. This also helped Ray to authenticate data gathered by him as ‘traditional language’.

He contended with dialectical variations. He considered in depth the phonology of the words (sounds of vowels, consonants, syllables, etc.), word-formations (roots and particles of words), and classes of words (demonstrative words and particles, adjectives, nouns, pronouns, verbs, adverbs, connective words, exclamations, and numerals). From his efforts he was able to conclude, for instance, that word formation in the Western Islander Language was “in the agglutinate stage, the significant roots and modifying particles being clearly distinguishable. The particles have no meaning when separated from the root word” (p. 9). And, by contrast, he was able to resolve that the Eastern Islander language was also “in the agglutinate stage, but the significant roots and modifying particles... [were] not so clearly distinguishable as in the language of the Western Islanders. The Particles have no meaning when separated from the root word” (p. 53). That
is, the grammar of the Western language was not as complex as the Eastern Islanders' language. For this reason, the Eastern Islander language was, he noted, "more difficult to analyse" (p. 49) than the Western Islander language and its "simple construction" (p. 7).

Ray (1907) also compiled a list of lexical forms from Mabuiag and Mer with corresponding meanings in English (see pp. 88-131). And he identified a list of alien words in use in the Islands. Some came from the Greek language. Some were from Hebrew and Latin. To Ray, they were obviously introduced through Scripture translations or by the Europeans who settled in the Strait. Words introduced by the Samoans and the Lifuans, as well as words of uncertain origin and adapted words were also appended. And thus from his consideration of all grammatical and lexical forms, he was able to conclude the following about the primary syntactical rules of the languages:

<table>
<thead>
<tr>
<th>Grammar of Western Language</th>
<th>Grammar of Eastern Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The Subject precedes the Verb.</td>
<td>1. The subject precedes the verb.</td>
</tr>
<tr>
<td>2. The Direct Object follows the Subject and precedes the Verb.</td>
<td>2. The object follows the subject and precedes the verb.</td>
</tr>
<tr>
<td>3. The Indirect Object usually precedes but sometimes follows the Verb.</td>
<td>3. Oblique cases of nouns usually precede but may follow the verb.</td>
</tr>
<tr>
<td>4. The case of a Noun depends on the meaning of the verb and its prefix, and so does not always correspond to the construction in English.</td>
<td>4. Adjectives or nouns used attributively, and possessives precede the word qualified.</td>
</tr>
<tr>
<td>5. Origin always requires the Ablative case in -nga, destination or purpose the Dative in -ka.</td>
<td>5. Adjectives or other words used predicatively follow the subject.</td>
</tr>
</tbody>
</table>
6. Adjectives and Possessives used Attributively precede the Noun.

7. Adjectives used Predicatively follow their Noun with the noun endings -nga or -mal for things or places, ig or igal for persons.

8. The Adverb as a rule precedes the Verb.

9. When a Noun denoting a position or part is used with another Noun it is placed in the same case. (Ray, 1907, p. 48)

Ray's work has provided useful information to people over the years, and particularly when they have wanted to counter claims from Westerners that Islander people did not have a systematic, grammatical language - they just 'jibber jabber' on first, like monkeys and later, like children. It is significant to Islanders of today for other reasons. For instance, there is now a record of the linguistic features of the languages spoken a century ago. However, what needs to be clearly noted about linguistic studies of this kind and the information produced by the linguists is that there was a lack of priority given to the position of speakers and therefore little understanding of the traditional languages beyond their grammatical order.

Throughout Ray's (1907) whole project, from his reviews to data gathering and analyses, there is little reference to Islanders as having an influence on the grammar of the language. Islander people only figure when identifiable elements of grammar require a owner. If the history of a language and its users/people are not factored into the primary standpoint then the knowledge about their language is diminished. However, this is not to invoke a concern about a shortfall in what linguists have done or currently do. It is to make the
point that the grammarians' angle on formal aspects of a language is fundamentally so that they may be taught later. Studies of this kind are content to describe and conclude with grammatical summations. Nevertheless the point remains that the grammarians' orientation to linguistic studies only sees language as 'ready-made' within a system of phonetic, grammatical, and lexical forms.

The early philologists were oriented diachronically to chart and document phonetic formation and changes in words, and to link “successive terms not perceived by the collective mind but substituted for each other in time without forming a system” (Saussure, 1959, p. 165). Such approaches as Saussure (1959, 1972) and Ray (1907) pointed out, were not very disciplined about what they did. Some, Ray argued, even adopted positions that, at times, were simply absurd. Saussure (1959), on the other hand, argued that the philologists, in giving primacy to the historical trajectory of words, had chosen quite wrongly to “ignore meaning and, by considering only the material envelope of a word, cut out phonic slices without asking whether they have a signification” (p. 141). Following the recognition of such shortfalls, Saussure and Ray opted to treat language synchronically. The only credible view to a historical locality worth considering, Saussure (1972) argued, was of some “indiosychronic” (p. 90) position in the grammar of language users. They both contended that through communal usage, language groups have negotiated common ways of representing their views of the lifeworld and thus in any one moment of speaking about their experiences, grammatical patterns and deeper structures can be found that rightfully belong to a fixed meaning-making system. As far as they were concerned, this was a system that “register[ed] a state of affairs” (Saussure, 1972, p. 91).

However, following the experiences of Ray (1907) and others, Saussure (1959, 1972) found that little care had been taken to define what grammarians were studying. It became increasingly obvious that a theoretical standpoint was
needed to articulate a historical position to language that fundamentally links with speakers. If it ever was to be a science, as Saussure contemplated at the turn of the century, linguists needed to clearly define first what it was they were on about. Saussure (1959, 1972) subsequently proposed that what modern linguistics of the 20th Century needed to be about was the linguistic sign. If meaning is to be considered as a process by which thoughts are expressed then all there is to do is historicise the ‘process’ as a psychological entity. Saussure’s preference for this position was articulated in a series of seminal works between 1906 and 1911 and was later published as Cours de Linguistique générale in 1916. If ‘sign’ can figure as this entity, as he contended, it would provide linguists a position to argue first, that ‘the sign’ is pivotal on speakers and a fixed meaning making system – the crucial link that is needed between people and language - and second, it would allow grammarians to maintain their allegiance to a primary fixed system albeit one now embedded in ontologies of psychological domains. For Saussure, what the grammarians needed was a clear focus to, and concern with, “the logical and psychological relations that bind together coexisting terms and form a system in the collective mind of speakers” (1959, p. 100).

Saussure’s (1959, 1972) linguistic sign was not about the literal word formed by the letters ‘m.a.n’ but about the relational aspect of what and how the word meant. To Saussure, a word only provided a sign to a meaning that was always external to the word itself. But, as he added, meaning for each word, thus the sign, is achieved only in its relation to other signs. No word can stand on its own and have meaning only by reference to itself. For example, the argument being made by him was that the word formed by the letters ‘m.a.n’ on its own has no real significance unless the word ‘man’ has been assigned a meaning in its relation to what was known as the sign ‘woman’, and vice versa. Meanings for signs in these ways thus can only be relational. Words on their own have no meaning. But, the sign and what is signed - signal and signification - did, and thus required primary consideration by
linguists. And with this position came his first principle, "the linguistic sign is arbitrary" (Saussure, 1972, p. 67).

Saussure contended that to approach the sign in these ways also enabled linguists to witness 'the fact' that relations between man and woman could be inscribed differently by different language communities. And by relating in such ways, this would also help explain how they can be peculiar to a particular language community. Such relations and their patterns of coexistence with each other subsequently gave him reason to maintain that in every language community there would be a unique pre-given structure which groups of people have adopted to identify themselves and their lifeworlds. And, with this came his second principle. The linguistic sign, he argued "(a) occupies a certain temporal space, and (b) this space is measured in just one dimension: it is a line" (1972, pp. 69-70). Others, in Saussure's eyes, neglected to consider these principal features of the linguistic sign and thus failed to see not only the pre-given structures but missed out on postulating a plausible measure for a psychological disposition of a language group. Structural linguistics in the modern era thus requires that more complex psychological structures by which daily communication operates are taken into account, and not only the history of the language.

That there was correspondence between variations within a language group was testimony to the 'fact' that pre-given structures existed. That there was no correspondence between two different language groups attests to 'the fact' that each language is unique to different groups of people. Language, according to Saussure, should then be treated as a fixed entity abiding by pre-given structures. In other words, its historical locale will be known as an already negotiated system of correspondences. And language owes its theoretical beginnings to 'the fact' that meaning can only be made from within a pre-given system. Saussure's (1959, 1972) position on 'signs' became a means to establish the science that has come to be known as modern linguistics of the 20th Century. However, this new science takes up a positivist
In trying to bring some authority to linguistic practices, there is a slip into an academic positivism once criticised by Saussure himself as non-theoretical. The new science of linguistics assumes that the psychological disposition of a group of speakers is just there, in their heads. And that this is known by the way speakers agree to make meaning correspond to their surroundings. The meaning-making system now has a home in the speakers' head but speakers have no determining position. They are simply bound to a fixed process of expressing thoughts. Language, in this science, thus continued its distance from people and the socio-political world that it occurs in. The people’s language and the history of its development is still secondary in linguistic studies, and is still as an ancillary consideration to the linguists’ readings of how grammar determines meaning.

**Summary**

The inability of linguists to give primacy to people and to the history of a language is a fundamental aspect of a linguistic practice that has continued to this day. This shortcoming has come about in a mode for documenting languages because scholars have taken for granted an approach that single-mindedly leaves out people and their community. Such an approach affords little priority to language formation in its socio-historical context. And, in its most basic position, psychologistic positivism, in modern day linguistics assumes some “special kind of discontinuity between the history of language and the system of language (i.e., language in its ahistorical, synchronic dimension)” (Volosinov, 1973, p. 54). Indeed, Saussure is well known for his separation of *la langue* (language system) and *la parole* (speech act/utterance). It is well noted that Saussure elected to prioritise in his science principles based not on the ideological history of a language but on how words are strung together at any moment in time according to the peculiarities of language groups and their pre-given structures. As Matejka and Titunik indicated in their translation of Volosinov’s *Marxism and the Philosophy of Language* (1973), there are serious implications in the way “synchrony is separated from diachrony in the investigation of verbal communication” (p.
2). Volosinov himself argued that the “dualistic discontinuity is absolutely insurmountable” (1973, p. 54). As far as he was concerned, language in its synchronic dimension could not be spoken of outside its historical position. And, language in its diachronic dimension can not be spoken of as outside of any communicative event. As he pointed out, “the linguistic forms that comprise the system of language are mutually indispensable and complementary to one” (1973, p. 54). The message to modern-day linguists who continue to engage in synchronic dimensions of living languages from social theorists who have a view to a philosophy of language is that,

... the actual reality of language-speech is not the abstract system of linguistic forms, not the isolated monologic utterance, and not the psychophysiological act of its implementation, but the social event of verbal interaction implemented in an utterance on utterances. (Matejka, 1973, p. 164)

However, it is hard to discount completely what linguists have achieved over the past century. By approaching languages solely in their synchronic dimension, modern linguists were able to document the grammatical structures and syntactical rules of many native languages across the globe. These outcomes have been very useful in the teaching of languages in formal settings. It even enabled people like Ray to make very astute claims in his work on traditional languages: “[t]he grammars now given, based upon oral communications and phrases taken down from native dictation, must therefore be regarded as superseding all that was formerly written on the structure of the languages. The vocabularies have also been corrected and extended” (1907, p. 5). There is little damage done even when grammatical structures are compared and resolved in the following manner:

1. The Western language of Torres Strait is Australian.
2. The Eastern language of the Torres Strait is morphologically [similar grammatical forms] related to the Papuan of New Guinea.
3. There is no genealogical [community of origin] connection between the two languages of the Strait.
4. There is no evidence of an African, Andaman, Papuan, or Malay connection with the Australian languages. There are reasons for regarding the Australian as in a similar morphological stage to the Dravidian, but there is no genealogical relationship proved. (Ray, 1907, p. 529)

However, it is problematic, when statements are made by modern linguists that claim that,

[although a morphological likeness between the languages of Papuans or Andaman Islanders cannot at present be satisfactorily demonstrated, it seems to be at least possible that as the two races are in practically the same stage of culture, the psychology of their languages may be found on closer knowledge to have some common features. (Ray, 1907, p. 525)"

In this statement it was speculated that through an understanding of the grammatical structures of languages in different parts of the globe a pre-given set of features of a native language group could be used to identify where people are located in the evolutionary process. However, it was not until the later work of Saussure on the linguistic sign that a methodological position was developed to link the living language to the psychology of its speakers. Nevertheless, the point here is that grammarians like Ray and Saussure continued to discount people, histories, and particularly the socio-historical positions of languages. Linguists who take up such a standpoint then simply do not have the means, other than speculation, by which they can connect people or their culture in a developing social world.

Irrespective of the factors that motivated linguists like Ray or Saussure in their standpoints, social theorists like Volosinov maintained that their form of the discipline still needed to be substantiated by a science that encompassed an interactive and dynamic social historical trajectory. In other words, they
needed to incorporate a political path to the speech event being described, and a presence that situates it fundamentally in an economy of negotiating social futures. To achieve this requires no less than a full consideration of the people, their histories, and their political position.

2. Physiology and Psychology: Charting the savage mind

Another crucial part of the Cambridge project was aimed specifically at the study of the mental characteristics of Islanders from two of the many inhabited islands in the Torres Strait, Mer and Mabuiag. This work was to provide a scientific basis to "the comparative physiology and psychology of primitive peoples" (Haddo, 1901, preface). As far as the multi-disciplinary team of researchers was concerned, "no investigation was complete that did not embrace a study of their psychology" (preface). This task was left to the trained psychologists Drs W.H.R. Rivers, C. S. Myers and W. McDougall with the assistance of Dr. C. S. Seligmann. Rivers (1901) however held the primary role.

The Cambridge project regarded its work as standing apart from previous experimental psychological studies. Previous studies, the Cambridge scholars contended, were done with a series of tests administered within an hour whereas the tests on Islanders they were to carry out were to be over several months, thus minimising fatigue factors that could limit responses. The Cambridge Project would also focus in more depth and experiment with "a certain number of individuals... many times and in different subjects of investigation on different days" (Rivers, 1901, p. 5). The compilation of data in Volume II is from the report on the physiology and psychology of Islanders and is presented in two parts. Part 1 reports on the study of 'Vision' namely, physical characteristics and disease of the eyes, visual acuity, colour vision (colour nomenclature, derivation of colour names, colours of rainbow, colour vision of the peripheral retina, colour contrast, after-images, preference for colour), and 'visual spatial perception' (binocular vision, bisection of lines, dissect lines into three or more equal parts, estimation of vertical and
horizontal lines, the Muller-Lyer and other illusion tests). Part 2 reports on 'hearing abilities' (pathological condition of the ears, auditory acuity, upper limit of hearing and smallest perceptible tone-difference), smell (olfactory acuity and discrimination of odour-strengths, memory and discrimination of odours), taste, cutaneous sensations (delicacy of tactile discrimination, localisation of point of skin touched, temperature spots, and sensibility to pain), muscular sense (discrimination of small differences of weight, and degree of the size-weight illusion), variations of blood pressure, and reaction times.

This particular volume is considered as representing an attempt to counter claims that native people were closer to animals. Their speculation was that, if extreme acuteness in the senses was observed in native people, on a scientific basis to be similar to those from 'civilised' places then it followed that the views held about native peoples as closely related to animals were wrong. Such acts of intervention on behalf of Islanders have continued for a long time free from sanction or scrutiny. It seems to have been the case that if the intent was a noble one, the practice was beyond question. Yet there is no clearer example of the refusal of Islander people's intellectual capacities, and historical position than in Rivers' (1901) Report. What the scientists did, especially in the ways they intervened and compared Islanders with Britons and others from non-Islander worlds, requires detailed scrutiny.

A. Vision

Physical characteristics and Disease of the eyes

Rivers (1901) initial goal in Volume II was to outline the physiological characteristics of the eyes. To do this he first had to locate a standard by which comparatives could later be drawn. If the physiological condition of the eyes showed no debilitating factor it could be assumed that the starting points for Islanders would be the same for those in the West. However, he forewarned,
on examining the eyes... I found a difficulty in getting an extensive view of the cornea and conjunctiva... it seemed to me that this was due to a greater narrowness of the palpebral fissure, but I have no direct measurements to show whether this was the case. (Rivers, 1901, p. 8)

Rivers' work contains numerous apologies like this for such limitations. However, this did not prevent him from making generalisations about Islanders. It is stated in Rivers’ (1901) report of the physical characteristics and diseases of the eyes that he considered the state of the cornea and conjunctiva, and found “in nearly all cases[,] the conjunctiva was pigmented” (p. 8). That is, the types of pigmentation that modify the epidermis of the eye, a protective layer or membrane covering the eyes including the cornea and the inner side of the eyelid, were seen to range from irregular patches to an even distribution over the eye giving the eye a “yellowish appearance” (p. 8). Other variations included patches that “existed together with the diffuse pigmentation; in other cases, especially in younger men and children, the rest of the conjunctiva was white and clear” (p. 8).

Rivers (1901) found also that “the cornea was immediately surrounded by a definite ring of pigment” (p. 8). He recalled this as something noted in Pergens (1898) descriptions of the Congolese, and Kotelmann’s (1879) notes of “a Negro”. He also noted that “a similar ring may be seen in many animals” (p. 8). In addition to this observation, Rivers witnessed cases of “a definite arcus senilis” (p. 8) - this is a greyish fatty deposit in the cornea found in older people. This made the cornea appear hazy and gave the “outer edge of the iris a bluish appearance” (p. 9). Opacities of the cornea too were observed by Rivers and were thought to be a factor that restricted visual acuity, especially in cases where the middle of the cornea was affected. Rivers noted that people who lived on the south-eastern side of Mer where it was very windy and dusty, and who appeared “less healthy in other ways” (p. 9) had “the most marked corneal changes” (p. 9).
Rivers (1901) found no cases of strabismus (viz., squinting) although conjunctivitis and cataracts were evident in the Islands. He also witnessed that pterygium and pinguicula were common. The latter two described the thickening of conjunctiva that spreads over part of the cornea that can, at times, grow across the eyes: "pinguicula forms one stage or part of one stage in the development of pterygium" (p. 9). He suspected that dust and smoke from within shelters, huts and houses were the primary irritants that brought about pinguicula and its subsequent development into a pterygium. The youngest case observed by him was of a boy aged 11 whilst the more marked cases were with men about 40 years of age. And, by contrast, the condition in older men was less marked. This led him to surmise that pterygium occurs in the early years. Insufficient observations of the condition in women inhibited any statement to be made on whether the condition could be differentiated by gender. Nevertheless, as the results of visual acuity tests showed (see p. 39) the presence of a pterygium did not appear to affect the Islanders' sight.

Rivers (1901) observed that the Islanders' pupil size was generally smaller although, as he regretted he, "did not make any measurements of the size of the pupils" (p. 11). Eccentricity of the pupils, on the other hand, was found to be hardly different to its presence with Europeans. But, Rivers thought it necessary to mention that the few observed were on the nasal side. And, that they conferred with Kotelmann's findings of three Patagonians in Berlin: "it is perhaps noteworthy in this connection that in such eccentricity as existed in Torres Strait, the displacement was also nasal" (Rivers, 1901, p. 11).

**Visual Acuity Tests**

Rivers started his work with the understanding that it was the common view amongst travellers of the day of "uncivilised parts of the world" (Rivers, 1901, p. 12), that "savages can see objects and hear sounds which escape the most acute European" (p. 12). Rivers pointed to much debate about this in the intellectual arena (see Nature, 1885, vol. XXXI, pp. 340, 359, 386, 407, 433, 457, 503, 552). Lord Rayleigh, in his debate with those who were "ascribing
to savage and semi-civilised races a higher degree of acuteness of sense than is found in Europeans" (Rivers, 1901, p. 12), argued that “on theoretical grounds there were necessary limits to the resolving power of the eye, and believed that the highly developed visual powers of the savage depended on his [sic] attention and practice in the interpretation of minute indications” (p. 13). It was Rivers’ view that his tests on Islanders would enable him to contribute to the debate as well as to speak with more authority on whether there existed such acuteness of the senses in the ‘savage’. He thus sought to test the visual capabilities of Islanders using the E method, Snellen’s letter test types (to be used presumably with children who knew the English alphabet), No. LIV (tests using numbers), and Guillery’s test-types (tests using black dots on white backgrounds).

The results from the E method suggested, of the 170 people tested from Mer, Mabuiag and Kiwai, 8.8% of them were below “what is often supposed to be the normal European standard” (Rivers, 1901, p. 25). This meant that 91.2% achieved higher results (see table I, p. 25). Islanders outscored the supposed norm for Europeans by a huge margin. In order to get some handle on this large discrepancy, Rivers moved to problematise the ‘supposed European standard’. If we were to compare the results of tests administered on army personnel by Seitz and Seggel (1883) in Germany, Rivers contemplated, we would see “no marked difference between the visual acuity of the average European and the Torres Strait Islander” (cited in Rivers, 1901, p. 27). Moreover, he suggested, if we were to use statistics and in particular average mean deviations, we will see similar advantages of Europeans over Islanders. For example, he continued, we may see from the average acuity rates from Cohn’s (1896) tests on the European population in Heligoland (see Table I, p. 25) that “Heligolanders are distinctly inferior” (p. 28). But, he contended, if we were to consider the distribution below and above the average vision $V=1$, the “difference... is not [so] great and seems to show that European islanders [sic] living an outdoor, seafaring life do not differ very greatly in visual acuity from Papuan islanders [sic] whose life is also largely spent upon the sea” (p. 104).
28). Rivers was able to show that if one chose a comparative wisely (e.g., German army personnel or average mean deviations of Heligolanders), the Islanders' high visual acuity could be assigned a lower status. But, he was then left with the problem of deciding what was to be the standard.

Results from Snellen's letter test-types, however, proved to be not so dependable because of the Islander children's uneasiness with the English alphabet. Rivers (1901) found that even with allowances for mistakes it was hard to gain results that were satisfactory. Moreover, he found that variations with the different letter shapes and sizes made it hard for him to gain any consistency and thus severed any chance of a definitive statement. What little was achieved, when compared with the results of the E tests, the children rated considerable lower. This confirmed for Rivers that the Snellen's letter-type method was totally inadequate for measuring acuteness of vision, and he later moved to declare that "the method... [was] scientifically defective as a method of testing visual acuity" (p. 31).

Snellen's Table LIV method likewise was first thought to be "the most Satisfactory of the methods which depend on counting" (Rivers, 1901, p. 33). He soon found that Islanders on Mer had a "very poorly developed" (p. 33) counting method and a limited vocabulary. These Islanders, he explained, had "words only for 1 (netat) and 2 (neis)" (p. 33). Numbers from 3 to 6 were described by compounding the words netat and neis whilst numbers beyond this were described using the joints of the fingers. Although they tried to use English numerals, and even with modifications to limit the use of numbers in Islander responses, Rivers found the results to be so inconsistent and unreliable that he declared Snellen's method in these situations as "entirely worthless" (p. 33).

Similarly, the Guillery's method was first considered: "the most satisfactory method of testing visual acuity" (p. 34). This method involved using a black dot on a white background and gauging the distance "at which a black dot of
a certain size situated in a square space is no longer distinguished from the ground" (Rivers, 1901, p. 34). As this test required the use of language, Rivers thought that he could get around this by giving Islanders "an empty square in which he [sic] had to mark the position of the dot in the same situation as occupied by that in the square to which... [Rivers] was pointing" (p. 34). However, no data is provided to demonstrate what levels of visual acuity were achieved by this method. Again Rivers makes an apologetic note, "[t]his method was necessarily laborious and I only made sufficient observations to satisfy myself that the method would be satisfactory if modified for ethnological purposes" (p. 34).

Rivers (1901) noted that he did make an attempt to look at Islanders who had an “abnormal refraction of the eye” (p. 35). Those “who were found to have low visual acuity were tested for errors of refraction” (p. 35). Presumably he meant the 8.8% who achieved low acuity levels from the E tests. However, with no ophthalmoscope or retinoscopy on his person, Rivers had to concede that “it was not possible to determine the refraction” (p. 35). He added that the task was very laborious: “[t]he natives did not like being tested. They were always interested in anything in which they excelled, but disliked having their inferiority in any respect shown, and consequently I had more difficulty with this than with any other of my observations” (p. 35).

Having failed to implement reliable visual acuity tests to corroborate his position on ‘the standard’ or his results from the E tests, Rivers (1901) resorted to the literature on hypermetropia and myopia for an explanation. Hypermetropia, or long distance vision, Rivers noted, “have been described as the normal condition of the child and of the savage” (p. 35). He supported this statement by citing results from other studies on children from the village of Schreiberhau as well as Negro children of Africa, and from studies of the “Lapps, Patagonians, Numbians and Kalmuks.... Sinhalese and Hindus.... Chippeway Indians.... Congolese” (pp. 35-6). Rivers was left then to make some general observations from his experience in the islands, “[u]nfortunately
I had not with me a convex glass of less than one diopter; [but] ...the fact that the vision of some was certainly not diminished, renders it probable that slight degrees of hypermetropia existed in Murray Island”.

Nevertheless, as Rivers (1901) continued, myopia, or shortsightedness, was considered to be “very rare among savage people” (p. 36). To support this view, he again cited from studies of indigenous peoples in the literature: of the 17 Nubians tested, only one was found to be myopic; of the Kalmuks, Sinhalese, Hindus, Lapps and Congolese no case of myopia was found; of the Negro children 2.6% were myopic; of the American Indian children 2.4% were myopic; of the 6163 children studied in Buenos Aries 4.2 were myopic. On the other hand, Rivers pointed out, myopia is considered to be a common feature in Japan, Armenia, as well as places like Georgia. This also was found to be the case with studies of children in Mexico who were “attending superior schools [and] who were of European parentage” (p. 36), 19% of them were myopic. Although Rivers considered the results from Mer to be unsatisfactory and insufficient to provide him with a “percentage of myopia in Murray Island” (p. 37), he was however able to note from his observations that “the condition certainly existed, but only in slight degrees and in a few individuals” (p. 37). From these comparisons hypermetropia is reported as a characteristic of people in ‘uncivilised parts of the world’ and myopia, by contrast, a characteristic of ‘more civilised’ people. Rivers was thus left to concede that although myopia ‘certainly existed’ the visual capacities of Islanders were hypermetropic like natives in other parts of the globe.

In order to interpret a set of findings that were pointing to Islanders having acute visual senses, Rivers (1901) problematised other stereotypes. He considered cases of astigmatism on Mer namely, poor focus or poor vision in one eye. Studies cited by him supported the view that “[v]ery few cases” (p. 38) of astigmatism existed in native peoples. But, as Rivers noted, several cases were found on Mer when Islanders were able to read the E in the vertical position, either the right way or backward, but not in the horizontal
position, either up or down, when viewed from the same distance. He subsequently noted that astigmatism occurred in Islanders who had longsighted visions as well as those who had shortsighted visions.

Rivers (1901) then went on to investigate the view that the “natives” (p. 39) were able to adapt their vision much faster in the dark than “Europeans” (p. 39). He started out with challenges that such a view of “visual acuity in feeble illumination...may be misleading” (p. 39) because adaptations to poorly lit areas are subject, for example, to familiarity with contents in the Islander house and thus may “suggest a greater power of vision than actually possessed” (p. 39). He set out to test this. However, he reported that due to the “unsuitability of improvised apparatus” no “definitive results” could be claimed. He set out, that is, to measure the time it took, after one had stuck one’s head in a dark chamber, to recognise a letter in the enclosed area. He selected three Islander boys and compared the results achieved by himself and Dr. Haddon. The men took 13 and 15 minutes to guess the correct letter but were not really sure whether they were correct. Two of the boys took 2.30 minutes and 6.40 minutes. Results from the third child were not mentioned. As Rivers learned from this test, “the method was not good enough to allow any definite conclusions to be drawn...[but they do] support... [the held view] that the eye of the Melanesian adjusts itself to the dark more quickly than that of the European” (p. 40).

In order to support his conclusion, Rivers (1901) referred to an emerging viewpoint that “increased sensitiveness of the dark-adapted eye depends on accumulation of visual purple in the rods of the retina. We know also that the formation of visual purple is closely connected with the pigment epithelium” (p. 40). This information led him to conclude:

In dark races there is reason to believe that the eye shares in the greater abundance of pigment, and it is quite possible that in deeply pigmented races visual purple may be formed more readily and more rapidly than in white races, and it is therefore quite conceivable that dark-
adaptation should take place more readily. (Rivers, 1901, p. 40)

The qualifications used here: 'quite possible' or 'quite conceivable', undermine the possibility of a scientific conclusion. Rivers apologised and indeed "regret[ted] very much that... [he was not able to] contribute more positively to the problem" (p. 40).

River's attempt to intervene positively on the Islanders' behalf clearly was not convincing. The conclusions he draws from these early studies of the characteristics of the eye and acuteness of vision was highly speculative. Data compiled on the comparative table (see Fig. I, p. 25) - especially in the final column where it records "percentages of those whose vision excelled what is often supposed to be the normal European standard" (p. 25) - suggests that 88% of people from Mer and 94.4% from Mabuiag scored better than the European standard. Rivers confronted these figures by saying that "the visual acuity of savage and half-civilised people, though superior to that of the normal European, is not so in any marked degree" (p. 42) when compared with the visual acuity of German soldiers. However, when Heligolanders were compared to Islanders they were found to be "distinctly inferior" (p. 28). He explained this as follows. When one considers that "errors of refraction producing defect in vision, and especially myopia, are much more common among civilised people" (p. 42), and if these cases were omitted from the count, the figures "do not exhibit that degree of superiority over the European in visual acuity proper" (p. 42). This result came from a rearrangement of the numbers. Rivers recognised that the European norm was indeed the fundamental problem for him. That is, he provided measurements from Germany that say the norm is underrated, and data from Heligoland that say the norm may well be correct if the numbers are rearranged. So, it follows then that if there is nothing that can be relied upon as a standard then what can be stated about the Islander is also without basis.
Rivers had to deploy another test to make the data fit better with the preconceptions of the time.

An additional test using the Masson’s Disc to measure “sensibility to differences of brightness” was tried (Rivers, 1901, p. 45). The results showed that some of the Islanders “had a much higher degree of sensibility than had been previously recorded for European vision” (p. 46). So high in fact that Rivers was moved to declare that the “degree of sensibility seemed to be so greatly in excess of what has been recorded among Europeans that I was inclined to be incredulous” (p. 46). However, on his return to England he tested 23 subjects and was able to achieve results similar to Islander people. His findings, albeit contrary to ones previously conducted on Europeans, as he claimed, was possibly because of his modification and application of the Masson’s Disc. Or, as he also thought to mention, it was possible that “previous observations have been made on laboratory workers whose visual powers are below average, or at any rate below that of many individuals” (p. 47). Whatever the case, as far as he was concerned, it was “sufficient that the... [Islanders] tested have not shown any superiority over Europeans [when] tested by exactly the same method” (p. 47).

What gave Rivers some confidence here was that when the results of the visual acuity tests using the E method were compared with the Masson Disc test there appeared to be corresponding trends for sensibilities to brightness as there was with visual acuity. The Islanders tested on both methods showed the same distribution patterns on each of the score charts. This was very important to Rivers because it confirmed his findings. The efficacy of these tests was important for another reason. The Masson’s Disc test verified for him that, when carried out with English people, it proved some fallibility to what was often “supposed to be the normal European standard” (p. 25). In other words, if the Islanders’ achievements on the E test showed a corresponding pattern with the Islanders’ achievements on Masson’s Disc, and if the English people when tested with the Masson’s Disc indicated that
they can score just as well as the Islander then it was conceivable that the often supposed European norm based on the E test was questionable. If the supposed norm was problematic, then the visual acuity scores of the Islanders could show no superiority over the Britons. Rivers made one last attempt to find a credible explanation for his standpoint.

Visual Powers

Rivers (1901) put together a case to draw a distinction between visual acuity and visual powers. He suggested that what he had done in his study was visual acuity proper wherein the “Torres Strait Islander was not found to be in any way extraordinary” (Rivers, 1901, p. 42). By contrast, he contended, what has won the admiration of travellers of “uncivilised parts of the world” (p. 12) was visual powers. The special abilities of the ‘natives’ to see things that are barely visible to Europeans like, spotting birds high in the tree tops, or pointing out boats over great distances, even “describe its rig and in some cases knew what boat it was.... were obviously of a kind in which special knowledge would be of enormous importance” (p. 42). He found himself at odds to explain how whilst on a boat trip between islands, Islanders on board were able to make out a steamer in a harbour with only a little of its mast showing. When they pointed it out to him he was not able to locate the mast. This was indeed the “miraculous” (p. 43) visual powers observed by fellow travellers to other parts of the globe. However, he pointed to a case in South America where Ranke (1897) having learnt and practised looking for objects over great distances, was able to increase his visual powers to be as good as the Indians even though he was myopic. Once taught to identify the gait of a male deer for instance, he was able to identify the sex of a deer at distances equivalent to the Indians. Visual powers, once understood as informed by localised knowledges, were no longer a special characteristic attributable only to the native. In other words, it was now recognisable as site-specific and thus able to be attributed to people of all societies. Indeed, as Rivers explained, “it is doubtful whether his [sic] visual powers excel those of the European.... There is little doubt that the most acute sighted savage
transferred to a Scotch moor would, in the unfamiliar surroundings, be a very poor match for the gille” (p. 44).

Rivers (1901), provided a scientific explanation for his generalisation. He suggested that “correlation[s] between acuteness of vision and the development of accommodation” (p. 44) should be considered. He maintained that there was a limiting aspect to vision. For instance when one focused selectively on an individual object, only things surrounding the immediate area can be seen. The held view in scientific communities was that “the amount of accommodation which takes place for distances greater than 6 metres [from the object being viewed] is negligible” (p. 44). For instance, if one looks across a room through the window and focuses on one end of the house next door, they see that part of the house but not the other end. To see the other end, one has to move their eyes to that side of the house to see it. Only by moving focus between the two ends can anyone arrive at some conclusive statement about whether there is a person on the full-length verandah. Rivers accepted that it was “possible that delicate gradations of accommodation may take place which adjust the eye to much greater distances” (p. 44) but, as he qualified, there was not much evidence of this.

More importantly for Rivers this explanation enabled him to maintain that there was “correlations between acuteness of vision and the development of accommodation” (p. 44). For instance,

The frequency of hypermetropia in savage races may also have some importance in this connection. It is one of the consequences of hypermetropia that accommodation becomes necessary even for the most distant vision. In the hypermetrope the mechanism of accommodation is always more or less in action, and it seems quite possible that with the more extensive use of accommodation, there may be associated a higher degree of delicacy of adjustment than exists in the emmetropic eye, and that by practice this may become in the case of the savage one of the causes of his superiority over the European. (Rivers, 1901, p. 44)
That is, the more focused one's vision is to the object being viewed the less it is that surrounding items can be accommodated. As Rivers (1901) explained, "[t]here is no doubt that the savage is an extremely close observer of nature" (p. 44), so close in fact that "[n]early every detail of landscape and seascape had its special name and nearly every species which the zoologist or botanist would recognize [sic] as distinct was also differentiated. In the case of familiar plants, such as the yam or banana, there were many named varieties" (p. 44). Focusing in depth on individual objects like this to Rivers was not a good thing because, and to step in line with Lord Rayleigh's position, minute distinctions of this sort are only possible if the attention is predominantly devoted to object of sense, and I think there can be little doubt that such exclusive attention is a distinct hindrance to higher mental development. We know that the growth of intellect depends on material which is furnished by the senses, and it therefore at first sight may appear strange that elaboration of the sensory side of mental life should be a hindrance to intellectual development. But on further consideration I think there is nothing unnatural in such a fact. If too much energy is expended on the sensory foundations, it is natural that the intellectual superstructure should suffer. It seems possible also that the over-development of the sensory side of mental life may help to account for another characteristic of the savage mind. (Rivers, 1901, pp. 44-5)

A huge theoretical distance was being assumed here between visual powers and mental development. Rivers (1901) was making an enormous leap without scientifically substantiating a position on either of these elements. The Islanders' visual capacities may be defended as not being animal-like but it is clear from the above that Islanders' were still 'savages' when considered in relation to those in the West. This is where the inevitable slip happens with regard to the noble intent. Rivers' history takes him to the more familiar territory of his own privileged position in 'civilised cultures'. Rivers' finding
makes evident a particular standpoint that differentiates Rivers from his intellectually constrained subjects.

Proclaiming Islanders to be in a lower position did not deter Rivers from his highly motivated goals (1901). He subsequently attempted an explanation for the discrepancies. He again retreated into the Western literature to cite Ranke's experience as a European living with Indians in South America. After living with the Indians for a while, Rivers pointed out, Ranke discovered that "he had lost his capacity for the aesthetic enjoyment of scenery, he found that individual objects forced themselves upon his attention and prevented his enjoyment of the scenery as a whole... he also found that, owing to the fact that he was continually attending to details... he was unable to devote attention to the more serious problems of life" (p. 45). The experience of a learned colleague, in other words, is brought forward to add to "the view that the predominant attention of the savage to concrete things around him may act as an obstacle to higher mental development" (p. 45). This is an attempt by Rivers to moderate the negative aspects of his findings. The superficiality of his method, however, is glaring and illustrates well the kind of interactions and inventions made on behalf of Islanders.

Rivers went to great lengths to 'write-off' the achievements of Islanders on the visual acuity tests, supposedly to distance native people from animals. His efforts in this regard were affected by his own lack of preparation and by his own scientific shortfalls. In his attempt to regain some intellectual ground he postulated that although the yellow-eyed native of uncivilised parts of the world - like the Islander - may score higher on visual acuity tests and may be perceived to have outstanding visual powers, they are not 'animal-like'. But, by the same position, he reaffirms that Islanders are in no way as intellectually advanced as the more cultured people of the West are. Islanders, to Rivers, simply did not have the visual traditions needed to develop an appreciation for the aesthetic aspects of life. To be a culturally intelligent people, he contended, there must be an appreciation of the aesthetics. And, as he
explained, "[t]here is, I think, little doubt that the uncivilized [sic] man does not take the same aesthetic interest in nature which is found among civilized [sic] peoples (Rivers, 1901, p. 45). Indeed, it is in fact what they do to gain the notable visual powers that interferes with their mental progress and hinders their development into 'civilised' dimensions.

Rivers, attempts thus to inform the debates in the annals of Nature not through the visual acuity tests in the Islands as he proposed to do but through his own speculations on visual powers. He makes an attempt to defend Islanders as a human race through statements unfounded by science. And at the same time, his initial noble intention degenerates into a reaffirmation of the superiority of the more cultured people of the West. Islander people are thus used to circulate particular academic debate. The documentation of the attributes of people in the Torres Strait Islands was not noble in its findings or effects. They were positioned into a new order of things that countered, in return for their participation, any positive validation of their attributes. By refusing primacy to Islander people's own historical trajectories, and by comparing them solely to what was most familiar to those in the West, the Cambridge project gave legitimacy to the ways non-Islander experts continue to demean Islander people as uncultured beings whose attributes debilitate their intellectual growth.

Colour Vision
Another characteristic of 'the savage mind' that Rivers (1901) sought to investigate was the development of colour sense. A popular notion of the day was that the colour sense of people developed over time and that stages could be identified in their naming system as markers of progress towards a civilised state. High culture or civilisation, at the time, was equated to many achievements made by those in the West including the appreciation of colours and abstract names for colours (C=1). The uncivilised 'savage', by contrast, was deemed to be someone who did not have an appreciation of such aesthetic forms (S<C=1).
The notion of colour nomenclature as a marker of cultural evolution first gained significance from an early examination by Gladstone of “the epithets for colour used by Homer” (Rivers, 1901, p. 48). Gladstone’s study (cited by Rivers) of names used by Homer led him to conclude that in Homer’s period little was known about the names of colours. What was found to exist mostly in early written records were notions of brightness and of darkness. Following this, Geiger (cited by Rivers) sought and found from much broader studies of the literature, an evolutionary pattern to the emergence of colours. From studies of the aforementioned kind, Rivers (1901) learned that red was the first to be named and “that the other colours had developed in the same order as that of the arrangement of the colours in the spectrum, the power of seeing blue and violet having been the latest to develop” (p. 48).

However, as Rivers (1901) acknowledged, attributing such developments in colour names as indicators of a primitive mind was not accepted by all learned colleagues. This was so because the early theorisation of colour nomenclature was based on philological grounds and not on any physiological evidence. The debate, according to Rivers, had one group of learned people arguing that the naming of colour was related to developments in colour sense and another refuting the idea that there was such a connection between colour nomenclature and colour sense. Virchow (cited by Rivers), for instance, argued that Geiger’s proposition was problematic as it assumed that deficiencies in colour nomenclature implied deficiencies in colour sense. Rivers, by contrast, felt well supported by the more popular position, as well as by studies like that done by Magnus (cited by Rivers) who argued that developments in colour nomenclature could indeed be related to physiological developments. However, Rivers was not able to find anything definitive in his study that could provide a conclusive statement about this. The best that could be said from his study was that “it show[ed] that defect in nomenclature for a colour may [my emphasis] be associated with defective sensibility for that colour and so far lends support to the views of Gladstone and Geiger” (p. 49).
What Rivers gained from his review of the ongoing debate was a notion of developments in colour nomenclature that emerged over time and in a similar order to the layers of colours as they appear in a rainbow. What was also gained was a stimulus to inquire into the Islanders’ colour vision in physiological ways, and to perhaps inform the debate on relating colour names and colour senses. What he faced was an unresolved position between a philological concept – names – and a physiological concept – sense. Rivers’ study of colour vision in the Torres Strait provides yet another example of the appropriation of Western schemas into the Islands, the conscription of Islanders into a new order of things, and the refusal of histories and experiences that informed the Islander positions.

*Colour Blindness*

Rivers’ (1901) first tested for colour blindness to establish a baseline for comparing Islanders with others. He set out and examined 152 individuals from both the eastern and western islands of the Torres Strait, and Kiwai Island to the north. Participants were asked to match the seven test-wools with similar colours beginning with red then green, pink, Holmgren’s green, yellow, blue and lastly violet. Each attempt and all combinations using these coloured test-wools were noted. The Islanders matched the colours satisfactorily and Rivers could find no case of red-green blindness. This was deduced from observing that no Islander “matched, or even transiently compared Holmgren’s pink wool with blue or violet, the most frequent confusions which occur in red-green blindness” (p. 51).

Rivers felt supported by his findings as they concurred with studies of colour blindness across the Globe – studies of Melanesians in the Loyalty Islands and German New Guinea (e.g., Schellong cited by Rivers), with studies in Africa (e.g., Pergens cited by Rivers), with Zulus in Berlin (e.g., Konig cited by Rivers), with African-Americans (e.g., Gould cited by Rivers), with Polynesians in Hawaii (e.g, Brigham cited by Rivers), with the Chinese and Japanese (e.g., Fielde, Stephenson, MacGowan, cited by Rivers), with Koreans
(e.g., Stephenson cited by Rivers), with Malayans (Stephenson cited by Rivers) with Amerinds of North America (Fox cited by Rivers) with Tamils and Sihaese (e.g., Kotelmann cited by Rivers), with Eskimos (e.g., Almquist cited by Rivers), with Aleuts (e.g., Stephenson cited by Rivers), with Lapps (e.g., Seggen cited by Rivers), with Samoyeds (e.g., Kirchoff cited by Rivers), with Chukchis (Almquist cited by Rivers), with people of central Asia (e.g., Kotelmann cited by Rivers) with Ossets of the Caucasus (e.g., Giltschekno cited by Rivers). With this kind of support, Rivers (1901) argued that, “It certainly seems... as if colour-blindness must be distinctly rarer in many races than it is among Caucasian and Semitic peoples” (p. 93).

Rivers (1901) also noted another potential characteristic of native peoples. He suspected cases of yellow-blue blindness when some of the participants compared yellow and blue wools, and blues with browns. But, as he explained, the persistence of these matches was not evident in other combinations. Perhaps the dullness of the yellow wools he suggested may explain the tendency for participants to associate blues with dull colours. It was possible that some of the Islanders were comparing dull colours. But, as he explained, those who made these mistakes were the same ones who did not fully understand what was expected of them in the experiment. Such aspects of the wrong combinations however were of particular interest to Rivers because they concurred with another study. Scholer (cited by Rivers) reported a case of a Nubian in Berlin who, as Rivers deduced, was “probably yellow-blue blind” (Rivers, 1901, p. 51). The Nubian compared red and orange with purple; blue with yellow and grey; and, yellow with blue and grey. Although the confusion was more marked in the Nubian, it was reason enough for Rivers to remain alert to any markers that could distinguish between Islanders and people of the West: “The subject is one of great importance, for it would be very remarkable if yellow-blue blindness, so rare among Europeans, should be present in other races” (p. 51).
Rivers (1901) claimed that “the number examined... [was] sufficiently large to justify one in saying that colour-blindness... [was] either absent in this race, or much rarer than among European populations” (pp. 52-3). He concluded that people of these parts of the world could see all the colours. What was of more interest to Rivers was if the Islanders could name all the colours.

Colour Nomenclature

Confident that the Islanders were not colour-blind, Rivers (1901) began to test and document the Islanders' system of naming colours by prompting them with coloured papers and coloured objects. The coloured papers purchased from Rothe of Leipzig were considered at the time to be the standard used by experts who tested colour vision. Using the paper and object combination also enabled Rivers to check for variations between the naming of a colour and the naming of a coloured object.

From his preliminary work on Mer, Rivers (1901) observed a gradient from children who hardly knew the names of the colours to the older folk who knew them all. Women, it was noted by him, did not know as much as the men. Moreover, in a later observation of colour recognition, Rivers (1901) noted that the older generation of Islanders could recall and reproduce the colours of the rainbow using the coloured test-wools but the younger men were not as good. To Rivers, this particular test, was useful in throwing some light on the Islanders' memory retention: “[t]he observations are interesting in one way as showing the degree of accuracy with which the natives can give a description from memory of a natural phenomenon” (p. 70). Just as this could have informed him that the older men were able to abstract a natural phenomenon and reproduce it from memory, it could have perhaps also said that the younger men on Mer were not really interested in reproducing rainbows. Instead, this suggested to him that “the failure of the young men is only one among many instances of the loss of the powers of observation of nature which has accompanied contact with civilisation” (p. 70).
The more revealing issue for Rivers was the definiteness of a name for red in the Islands and the uncertainty about a name for blue. According to the philological evidence in the Western literature, the name for red was the first to emerge and the first to become a universal term, and subsequent names for colours developed in order of the colour spectrum with blues last. Rivers speculated that the definiteness of red in Islander schemas and the uncertainty about a name for blue could signal a prolonged primitive status. And, if we considered that the colour nomenclature of people from the West as fully formed, or $C=1$, then anything short of this, or $S< C=1$, we could assume that we are dealing with an earlier stage in the development of things. Rivers was convinced that any shortfall in the colour nomenclature would confirm for him that he was dealing with a characteristic of the savage mind.

In deploying his $S< C=1$ schema, Rivers exemplifies another instance that refuses Islanders' histories and experiences. The two crucial elements that gained special interests and which informed Rivers' formulations were the derivatives of colour names and the definiteness or indefiniteness of colour names. Rivers (1901) documented the names of colours used in the Torres Strait, identified their derivatives, as well as noted qualifying terms used to describe shades of primary colours (colour shades were mostly reported as big, small, good, similar to, bad, dirty, etc. see pp. 56, 60, & 61). From his consideration of the colour nomenclature system, he observed that the names of colours “nearly all come into the lives of the people in some practical way, either as food, medicine, or as objects used in sorcery” (p. 63). Although there were representations made by him to indicate that blues and greens were derived from names used for the sea as well as leaves, the blood and bile names in red and green, as he himself pointed out, featured in more definite ways. For instance, he recalled from the literature on Melanesia that the use of the word blood in red is very common. He recalled from the literature on Asiatic peoples they, like the Islanders, have similar correspondences between the name for green and the name for bile and the gall bladder. He did accept however that the English name for gall and yellow “are [also] closely
connected" (p. 63). But, to Rivers, it was more of a systemic issue in native communities that "[o]bjects which might have attracted attention on account of their beauty seldom seem to form the basis of colour names" (p. 63). Apart from one case in Mer where a flower was the basis for a name for yellow, Rivers found that the names of flowers generally did not feature in the Islanders' colour vocabulary. This was, as he stated, very much unlike the British and their "use of violet, pink, mauve, heliotrope, rose, etc., all derived from the names of flowers" (p. 64).

The association of the word for red with the name used for blood, according to Rivers as well as the Western literature on native peoples, was a telling indicator of their savage status. There are however two things that need to be considered here. First, no comparative comment is offered on the origins of the English word red. For example, red: Islander name for blood; green: Islander name for bile and gall-bladder; yellow: English word closely connected to gall; Islanders hardly use names of flowers for colours: those in the West use a lot of flower names for colours. The lack of a comparative comment for the English word, red, cast the Islander usage in an extreme and negative way. Also, there is no mention of findings by his colleagues, Haddon and Ray, who drew especial notice to the fact that the Islander word kulka is used for red as well as blood, "[b]ut kulka, as Mr Ray was definitely informed, is used also for the dawn, as e.g. ar kulka, the dawn reddens: hence Kulkalaig means Eastern people" (Haddon, 1904, p. 2). My family and the community I belong to are the Kulkalaig people being referred to here. People on a nearby island to us (my relatives) are known as Kulkalgal. We are literally the people to the East of Muralag, Badu and Mabuiag islands - the place where the sun rises. However, I grew up with and learned only to accept such a reading of our place in the Islands as bloodthirsty people.

To Rivers, it was "noteworthy that the sea, rather than the sky, should have been the source of the word blue" (p. 62). The variations in the colour of the sea range from aqua to black in the Islands, and they change from week to
week depending on the time of the year, the phase of the moon, the velocity of the wind, the strength of tidal surges, or the depth of the water. In these parts of the world, just south of the equator, there is no winter. The sky is always blue even behind the clouds and, of course, black once the sun has gone. Because Islanders depend on the sea for staple foods, there is much attention paid to the changing conditions of the sea, more so than the almost unchanging blue of the sky and the black of night. Names for colour derived from the sea seemed not to have developed for the British. Rivers regarded the primary words for colours that come from the sky as indicators of a higher position than those words for colour that we determined from the sea. This allowed him again to position Islanders as inferior.

The next most important elements that informed Rivers’ (1901) position on the Islanders’ primitive status was the certainty and uncertainty about the names for colours. This was the other crucial aspect of Rivers’ argument that enabled him to claim that the colour nomenclature was not as fully developed for Islanders as it was in the West.

Table 1: Frequency of terms used for Colour.

<table>
<thead>
<tr>
<th>Colour</th>
<th>Eastern Islanders</th>
<th>Western Islanders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>“In Murray Island [Mer] red was called manamaman by all” (Rivers, 1901, p. 53)</td>
<td>“Red was called kuladguradra by nearly all” (Rivers, 1901, p. 57)</td>
</tr>
<tr>
<td>Purple and Pink</td>
<td>The same Islander name, kebe manamaman was used “... by many” (p. 54), three other names were in use.</td>
<td>The same Islander name kuladguradra was used “... by most” (p. 57), several used three other names.</td>
</tr>
<tr>
<td>Orange</td>
<td>“Orange was called bunbun by nearly all” (p. 54), three other names were used.</td>
<td>“Orange was called modoguradra... by the majority” (p. 57), four others</td>
</tr>
</tbody>
</table>
It was the frequency of the terms used by Islanders that enabled Rivers to arrive at a position on the state of the colour nomenclature in the Islands. There was certainty about red, less so for purple, orange, yellow and green, and even less so for blue and violet. Rivers did not quantify this data in comparative tables as he did with the visual acuity tests. Nevertheless, we can gather from the above list how he arrived at the view that,

... there was great definiteness and unanimity in the nomenclature for red, rather less so for orange and yellow, less so for green, and very great indefiniteness for blue and violet. (Rivers, 1901, pp. 54-5)
The great definiteness about red has been resolved by its consistent reference to blood. By contrast, the great indefiniteness for blue in the Islands depicted for Rivers (1901) an unresolved situation: some used terms from the sea; some used the same term used for green; and some used the term used for black. That there was no unanimity for a word for blue suggested to Rivers that people in these parts of the world had not yet resolved amongst themselves a common term for blue. And, because Red has already been negotiated to one common term, it all confirmed for him that he was indeed dealing with a group of primitive people who were in the early stages of their cultural development—a people with little appreciation of aesthetics.

If Islanders offered more names for blue than they did for red, as they did in documentations by Rivers, could we suppose that, and to the contrary, it was because blue was far more advanced than red? In the Islands there are very important reasons to have multiple names for blue. If we consider that Rivers noted words and variations of words for blue were more reliant on the sea than the sky for practical reasons then it is conceivable that close attention had to be paid by Islanders to the different shades and hues of the colour blue? This is particularly so, if the success of diving, fishing, hunting, and trapping of marine animals and mammals is contingent on particular tides, currents, and changing seasons. There would need to be concentrated attempts to make distinctions between the changing blue of the water: spring tides (green-white), blues of neap tides (blue), the blues of deep water (blue-black), the blues of shallow water on grass (green-aqua-clear-yellow), the blues of shallow water on sand (turquoise), or the blues of tides on reefs (clear-brown). And, of course, we need to consider that these colours are most evident when the sun is directly overhead. Even today, if an Islander is asked, the Islander will offer a different name depending on the elements. It will depend mostly on where the Islander is positioned physically in relation to an area of water being referred to, on the presumption of a possible activity that could be conducted in that region, as well as on the intended time for a visit. Say, for example, if an Islander is asked whether diving for crayfish...
would be appropriate on a spring tide, they will tell you 'no, dirty water' viz., poor visibility when diving. In other words, pointing to the water as an object and asking the Islander “what colour is that?” there is every possibility that an answer will be “dirty water”. This nomenclature does not signify that the water is the colour of dirt. It signifies an element of cloudiness that reduces visibility when diving. The actual colour is irrelevant in this designation.

The other prominent names used for colours by Islanders that intrigued Rivers was the corruption of the English word blue, as _bulu-bulu_. But, if we consider that apart from the sky, the sea, and some birds and fish, there was no other blue item in the natural environment, and if we consider that all other blue items used as objects (e.g., coloured patches and glasses, personal adornment, or clothing) in Rivers’ study had to be referring to items introduced by those from the West then it would follow that Islanders were mostly obliged to provide the English term used with the introduced items. That is, _bulu-bulu_ is not necessarily a replacement term due to an absence of an Islander name and thus a revealing factor to be considered as a corruption of an English word but, and more appropriately, the use of a term that rightfully belongs to the introduced items.

Just as an argument can be made about the unanimity or certainty about the word for red as an indicator of development, a counter argument can be made in favour of the extensive vocabulary of the word for blue, its prominence in Islander communities, and the use of very refined terms to argue that it was the more established code in the naming system. Whichever ‘truth’ one accepts the central tenets suggested are: the philological argument that red was the first developed colour name in the early Western literature and ‘blues’ last. In the islands of the Torres Strait there may well be another historical trajectory that could help provide alternate explanations to the Islanders’ colour nomenclature. Whilst such a definitive statement about an alternate position is difficult to make, by posing its possible inclusion into the equation, even raising its very possibility, makes it quite evident that by
refusing such an option, the Islanders could only have been measured against the achievements of those in the West. This exemplifies again how non-
Islanders refuse to include any of the Islanders’ standpoints.

Rivers (1901) determined the colour nomenclature, especially at Mabuiag Island, as the most extensive system he has seen in the academic literature, and even more extensive than the colour vocabulary of Mer Island. Islanders in the western parts of the Strait, according to him, had “some natural object in mind to compare with every shade of colour shown to them” (p. 64). As far as Rivers was concerned, “the colour vocabulary illustrate[d] very well the extensive knowledge which the savage possess[e]d of the concrete things around him and the powers of observation which are associated with this knowledge” (p. 64). For him, the intricate system of naming colours, and every shade of colour with concrete objects, helped to explain why when attention was devoted primarily to minute distinctions cultural development was impaired. It helped to explain the Islanders’ lack of interests in aesthetics. He thus went on to proclaim that the stage of development in the Islands was “but one indication of a characteristic feature of the savage mind i.e. a complete lack of any aesthetic interest in nature” (p. 64), and that “[t]his lack of aesthetic interest may be directly due to over-development of the sensory aspect of mental life” (p. 64).

*The Comparative Picture of Colour Nomenclature in the Region*

The position of the Islander in relation to the West was thus revealed by the studies of the Cambridge project. But the question remained. Where were they situated along the evolutionary continuum? One of the ways to answer this was by comparing the Islanders with other native peoples of the region. Rivers (1901) and his colleagues put together data from the Fly River district to the north on the Papua New Guinean coastline, and built a continuum of practice between the three sites to suggest that stages of primitiveness could be identified in the different codes for naming colours. His entire argument was based around his data on names for the colour blue: “As regards blue,
the three languages may be taken as representative of three stages in the evolution of a nomenclature for this colour" (p. 66).

Data from the Fly River district, for instance, Rivers reported, showed no word for blue. This is a place at the mouth of one of the biggest river systems in a country, with rainfalls measurable in metres, that start at mountains higher than anything in Australia and have a short 100 kilometres or so to travel to the coastline. The water is mostly filled with silt and debris. It is also the meeting place of fresh and salt water. For many months of the year, layers of fresh water sit on the surface of the waterways and look mostly brown. Kiwai Island when compared with the islands in the Torres Strait is the more isolated. Contact with non-Islanders and their material objects thus were very limited. These conditions go some way to explain why Rivers could find “no word for blue” (p. 66). Most used the same term for green, “black, dull or dirty” (p. 66) whilst budu-budu did not feature at all in their language.

Data, on the other hand, from Mer indicated “no proper name for blue” (p. 66). Most, he noted, used a modified version of the English word, budu-budu, and in its absence they use suserisuseri (blue and green) and occasionally gegepole (black). And contrasting with Kiwai and Mer, data from Mabuiag, Rivers (1901) “present[ed] a more developed stage in the existence of a word, mudukonmdra, which is used definitely for blue, but is also used for green” (p. 67). The Mabuiag people, he noted, also had “the tendency to confuse blue and black” (p. 67). He was surprised that Islanders would compare the colour blue with the dark of the night. He was even more perplexed when “these natives would compare a brilliant and saturated blue to the colour of dirty water” (p. 94).

The immediate task for Rivers was to locate people of this region according to developments in their colour nomenclature. Data from Kiwai suggested that they were in a much earlier stage of development in their colour nomenclature than Islanders. Data from Mer on the other hand suggested
that it was not as developed as Mabuiag. He also learned from his colleague (Ray, see p. 87) that the colour nomenclature used by Aboriginal people on the Australian mainland was even “less developed than that of the Kiwai [people of the Fly River District] (p. 67). So the intellectual continuum over a 700 square kilometre region was determined mostly according to the different configurations of blue. This enabled a view of an evolutionary path that began with Aborigines in the south, travelled north past Mer to the Kiwai people in the most north eastern corner of the Torres Strait, then south to Mer almost a third the way back to the Aborigines, and then to the far west of the Torres Strait to Mabuiag. This data may have told Rivers that Islanders were not like Aborigines in Australia, not like Kiwai people in the north, and definitely not like those in the West.

**Colour Sense**

The indefiniteness of names for blue was seen to be a common trait amongst native peoples even though every shade of blue could be distinguished from each other. However, there was no definitive position on why there was uncertainty about the term for blue in the nomenclature. Rivers thus sought to make quantitative observations to measure any “degree of insensitiveness to this colour, which makes a given blue a darker and a duller colour than it is to European vision, and may help to account for the confusion of the colour with black” (p. 70).

Rivers (1901) had with him a Lovibond’s Tintometer borrowed from Lovibond - a tube-like instrument one looks through to see three different coloured glasses passing over two square holes that allowed the light in and enabled the experts “to determine the threshold for each of the three colours” (p. 71) red, yellow and blue. Each of the three glasses was separate in colour, and had the entire area covered with gradual stages of colour from clear to highly saturated. Rivers rotated a coloured wheel from its faintest point to the highest saturation point and then back down again. The Islander was to peer into the tube and identify colour, or lack of colour, at the earliest possible
moment as the glass passed over the square holes. The results of Rivers' experiments was able to “show that the Murray Island natives distinguish red when very faint much more readily than blue, while, by the same method, to European vision there is little difference” (p. 95).

However, from later work on colour vision of the peripheral retina (pp. 75-80), Rivers was left in “no doubt that the colour blue was recognized [sic] readily, even more readily than other colours” (p. 79). That is, Rivers got the Islanders to stare directly at him whilst he introduced colour patches gradually from either side to distinguish at what point, and at what angle, Islanders could determine colours. The early detection of blue patches before any other was significant and was a contrary finding. Rivers' explanations was thus: “the most ready way of reconciling the two observations is to suppose that the defective sensibility to blue is due chiefly, or altogether, to the influence of the macula lutea” (p. 79). His hypothesis was physiological and he referred to the literature to help his case: “[i]t is well known that owing to yellow-red pigmentation of the region of direct vision, blue and green rays are absorbed more strongly than in the extra-macular regions of the retina” (p. 79). ‘It’, however, is not sourced to anything and remains anonymous in this formulation. He went on,

There is, so far as I know, no actual evidence that the yellow pigmentation of the macula is greater in black-skinned people than in the Caucasian races, but there is little doubt that this must be the case. If so, the absorption of green and blue rays would be greater than in the European eye and may account for the relative insensitiveness to blue. (Rivers, 1901, pp. 79-80)

The unconvincing nature of this proposition did not prevent Rivers from reaching his conclusions. For Rivers, the colour patches fell entirely in the macular region with the tintometer tests whilst tests of the peripheral vision were distinguished in the extra-macular regions of the retina. It was then conceivable that “the defective sensitivities for blue is to be regarded as a
function of the pigmentation rather than of the primitiveness of the...visual
organ (p. 80). It was a credible position only of logic, and not one established
by physiological science.

Rivers (1901), having no further scientific apparatus on hand, sought to gain
some idea of the colour sense among Islanders by asking them to pick from
coloured papers what they liked most. Some were asked to pick the three
best colours whilst others were asked to arrange all colours in order of
preference. One person arranged the colours in the exact same order as that
when Rivers was charting colour nomenclature. Not satisfied with the
efficacy of this experiment, Rivers then asked Islanders to discuss their
preferences and found “in these cases that they never finished by agreeing
with one another, but each gave his [sic] independent opinion” (p. 83). He
found this to be the case also with married couples and their deliberations on
colour preferences. The colours most popular with Islanders, he reported,
were red, purple, indigo, black, yellow and, of course, blue, green and violet
were the least favoured – just as they are depicted in the Western order of
things. There was another notable element:

I was inclined to regard the frequency of black among the
papers chosen by the men as a very doubtful feature, and
as indicating that they did not understand properly what
was wanted, but when I found that black was so
predominant in their personal adornment, it became no
longer unsatisfactory, and may be taken as an indication
of a real liking for this colour (or absence of colour).
(Rivers, 1901, p. 83)

He then made concerted efforts to observe what people wore to church on
Sundays. From these observations he noted that black was most popular with
the men, then red, green, and of course blue was the least present. Women,
by contrast, wore red mostly, with pink coming in second, then blue, and then
yellow. There was, Rivers (1901) noted, a notable absence of green colours
amongst the women. The combination of colours worn by the Islanders
suggested to him that there was a preference for yellow to be worn with blues, and reds with greens. By contrast, Rivers described the red and yellow combinations worn by the Kiwai people as “hideous” (p. 84). And when a father preferred yellow to be combined with blue and his daughter chose instead to combine yellow and scarlet, Rivers made comment that, “the man certainly seemed to have the better taste” (p. 84).

With no further supporting evidence to inform the debate between colour sense and colour names, Rivers (1901) deployed his authority on the matter,

The bearing of this on the controversy mentioned at the beginning of this paper is obvious. In ancient literature, as among modern barbarous and savage races, it is the colour blue for which nomenclature is especially defective, and in Torres Strait this characteristic defect of nomenclature has been found to be associated with an appreciable degree of insensitiveness to this colour. The colour vision of the Torres Strait islander [sic] gives some support to the views of Gladstone, Geiger and Magnus that the defective colour language of ancient literature may have been associated with a defective colour sense.... There can be very little doubt, however, that any physiological insensitiveness which may exist, can only be one of the factors determining the characteristic features of primitive colour nomenclature. (Rivers, 1901, p. 95)

There may be any number of explanations for this. There is however little to go on from Rivers’ data that could be correlated between colour nomenclature and colour sense. The evidence showed in one experiment that there may be physiological insensitivity for the colour blue but another of his test showed evidence to the contrary. Such opposing findings provide support for the more popular position forwarded by Gladstone and others. What one needs to be careful about first is accepting that there was a defect in colour sense.
As for the ‘characteristic defect’ of nomenclature, I tried to show here that what constitutes the basis to such a claim was none other than the canonical views of those from the West. In other words, it was foremost about the order of developments in the old literature, the order of the colour spectrum, the order of colours as they lay in a rainbow, the order of things as they stand already achieved in countries of the West. It was an appropriation of a Western schema of colour vision deployed to undermine those in the Islands. Out of such an approach to the study of colour vision in the Islands, Rivers was able to conclude that the Islander nomenclature was not fully formed. In these ways and only these ways, does the absence of pretty flower names and the persistent use of blood names for red, characterise for Rivers the savage mind. Likewise, the apparent absence of any appreciation for aesthetics in the naming system condemned the Islanders to a primitive status. But in relation to developments in colour nomenclature of other people in the region, Islanders were conscribed at least as a little more advanced along the evolutionary scale. That is, the means by which Rivers was able to invent a model for charting colour nomenclature was also the means by which he could intervene and judge the Islanders in relation to their neighbours in the north as well as to the south. Such a process for understanding the colour nomenclature in the Islands was both the means by which the experts could name characteristics of the savage mind and to condemn Islanders and their neighbours to a lower position.

Visual Spatial Perception

Some of the basic aspects Rivers (1901) sought to document when testing spatial perceptions were the accuracy of the contributions, the constancy of each attempt, and its comparative value when compared with the overall results of the same group. Although all measurements were numerical, the use of illusions as the stimulus for the tests provided Rivers a measure of the participants’ psychology. An important aspect that Rivers was interested in was the degree to which individuals were affected and how each person’s scores corresponded to the rest of the group. Measurable degrees of variation
of individual scores were chartered and then compared with the overall degree of variation amongst all participants so that the results could figure as normative findings for the group as a whole. The elements of these tests thus became the means to identify the 'essential' characteristics of particular groups of people. And it was entirely on this basis that Rivers was able to draw comparisons between entirely different groups of people, e.g. “by the smallness of the mean variations and by the general consistency of the results” (p. 127). Islander attributes are afforded some reality of their own but once again it was their comparative value to those in the West that was most significant.

Rivers' (1901) initial goal was to consider the physiology of the Islander eye to see if there was anything that could affect the degree of illusion at different distances. He used Hering's fall experiment to test whether Islanders had binocular vision. This required the Islanders to look through a cylindrical tube at a bead that was held up by very fine wire at a distance of two feet, and gauge whether objects dropped into view were “nearer or farther from himself than the fixation point” (p. 97). Rivers explained, “[t]hose with binocular vision are able, when using both eyes, to estimate the relative distances of such object even when quite close to the fixation point, while individuals without binocular vision are in the same position as normal individuals when only using one eye, and are unable to judge the relative distances of the falling objects even when much nearer or farther from the fixation point” (p. 97). He found, from seventeen Islanders tested, that when both eyes were in use nearly all were correct while, the results from the use of one eye were correct only half the time. He then compared his results to other tests on double images to point out that Islanders shared attributes with Europeans. But, as he pointed out, “[p]erhaps the main interest of these observations is to show that the Torres Strait people were certainly quite as good observers as the average European” (p. 99). This was to demonstrate that a common starting point to his tests could be assumed.
Rivers (1901) also made some preliminary test to assess the Islander's ability to estimate distances - "Estimation of length by the eye" (p. 100). Two standard lengths were given, 80mm and 160mm, and four Islanders (aged between 40 and 60) were to move a cursor along a ruler to what they estimated as the length of each standard. Rivers began by placing the cursor at the lower end of the ruler before asking Islanders to estimate the distances. Later it was placed at the top end. In all, there were ten attempts at each of the standards, five from the former position and five from the latter. The averages of all ten attempts, for the 80mm standard, indicated the Islanders were not far off the norm. The first Islander estimated, on average, 74.6, the second 79.75, the third 76.8, and the fourth 80.4. The corresponding results of the 160mm standard were 152.7, 149.4, 160.1, and 153.45. Rivers observed from these results, "a distinct tendency to make the variable length shorter than the standard" (p. 101). There was also a notable difference about the starting point of the cursor: "the variable was made larger when a long distance had to be shortened than when a short distance had to be lengthened" (p. 101). This is, as he explained, something that was also done by Europeans, and "the same peculiarity [that] is also very marked in the observations on the Muller-Lyer illusion" (p. 101) experiments.

**Bisection of Lines**

Rivers (1901) proceeded then to observe how Islanders divided 100mm lines into two or more equal parts. He experimented first with 20 Islander men and 12 boys from Mer. These participants were asked first to bisect the 100mm standard into two equal parts. The men measured, on average, the left half 51.4 and the right half 48.6 - to Rivers, the tendency of all attempts was to make the left half longer than the right half. However, only the results of nine are provided in Table VI (p. 102). They nevertheless show similar tendencies to make the left longer than the right and that after three or more attempts similar averages of 51.5 and 48.5 were obtained. The boys on the other hand had an average of 50.1 on the left and 49.9 on the right - the tendency to the left was not as constant as for the men (see Table VII, p.
103). That is, to Rivers, there were as many children who had tendencies to the left as there was for those who went right. However, to Rivers, individual measurements showed the children to have a greater degree of difference, which indicates that no greater value could be placed on the children's ability to estimate than the men's ability.

When compared with the achievements of 15 English psychology students and 12 village children (who were on average older than the Mer children) from Girton, near Cambridge, there was an opposite tendency to measure the right half bigger (see Table VIII on p. 104). Rivers (1901) pointed out that not much can be made from this except that "nearly all the Murray Island men had a constant error in one direction, while the English individuals had an error in the opposite direction" (p. 104). However, the average mean variation, says Rivers, is worth noting (see Table VIII, p. 104). Whilst the psychology students scored better with an average mean variation of .56, the Mer men and boys with averages of 1.31 and 1.77 could only be compared with the English children's at 1.27. In Rivers' terms, "[t]he results given here show that the Murray Island man and boy are able to perform the simple operation of dividing a line into two equal halves with nearly as much accuracy and constancy as the English village child" (p. 104). However, it was the constancy factor in achieving those results that separated them from the psychology students. By comparing the average mean variation of all attempts, the data was able to be interpreted in ways that could show the Islander men to be more erratic with their estimates than the psychology students, indeed to have a consistency level of a village child in Girton, Cambridge. Only the overall results of psychology students and the Girton children were provided in the comparative Table VIII which, in effect, preclude us from any further scrutiny of the data from England.

In the following tests on dividing a 100mm line into three or more parts, Rivers considered a measure of accuracy. The average estimates of 8 Islander men and 6 boys from Mer were compared with 12 Girton children. Again
The overall scores of the Girton village children are provided (see Table X, p. 107). The cohort of psychology students was not compared in these tests. Rivers reported that the accuracy of the Islander men, to divide the 100mm standard into three equal parts, varied by 2.99. To divide the standard into four equal parts the variation was 2.36. And, to divide into five equal parts the variation was 3.09. The Islander boys achieved on average a degree of accuracy that varied at 2.41, 2.58, and 2.4 over the same tests. The Girton village children results were 2.09, 2.08, and 2.3. Rivers noted from these figures that, comparatively speaking, the accuracy of the Mer children in bisecting lines into three or more parts was “consistently smaller than for the adults, i.e., the accuracy of division was greater in the children” (p. 107). And, when compared to the collective figures from Girton, Rivers showed the results from the village children in the U.K. to be “slightly smaller than those of Murray children” (p. 107) but as he says, not necessarily “inferior to the English child” (p. 107).

However, a cursory check of the extremes (see Table IX, p. 106 and Table XI, p. 107) of each Islander average estimates would confirm - if we were to apply the previous priority to consistency or constancy factors - that the individual scores of the children were notably erratic when compared with those of the men. That is, the extreme variation in the Islander children’s estimate was 7.07:0.4. This far exceeded the men’s at 5.07:1.53. If the main goal was about the psychological aspects of seeing, that is, the way illusions are formed by particular groups of people, this should have been noted. But this was not to be the case. Rivers went on instead to make other observations from the data.

Except for one of the children tested, Rivers found that the Islanders mostly did not divide a line into four parts by bisecting the line into two equal parts first. He noted, as well, that the English village children divided lines from left to right as did the Islander children “and there can be little doubt that this was due to the influence of their school education” (p. 108). By contrast,
Rivers found that, of the eight men tested on Mer four started bisecting from the left, three started from the right, and one began from both ends. Rivers (1901) concluded that when taken “into account the number of trials necessary before the lines could be divided successfully and the degree of accuracy as compared with the Girton children the Torres Strait natives were distinctly deficient in this operation” (p. 108). But, as Rivers explains, albeit condescendingly, when one considers the language difficulties in undertaking such an experiment as well as “their deficiencies in numeration, the results were surprisingly good” (p. 108).

However, this finding has been a very selective conclusion of the Islander attempts to divide a line into three or more equal parts. The Islander men’s rate of constancy or consistency in these tests was not fully realised for a number of reasons. First, Rivers chose to highlight and compare the degree of accuracy of the participants. Second, a measure of the extreme estimates were not considered by Rivers in order to compare Islander men and Islander children. Third, no comparative measure can be made of these methodologies because details of the English participants and their extreme estimates were not provided. Fourth, neither the accuracy nor the constancy factors could be valued against those of the psychology students. Instead, Rivers chose to highlight tendencies and patterns of the physical ways participants carried out their measurements. These are of course important elements to note. But, to understand the psychological disposition of a group of people, aspects of visual spatial perceptions must also be considered. Naming deficiencies in how participants carry out their tasks is simply not enough.

Estimation of Vertical lines
Rivers (1901) went on to test whether Islanders could draw a vertical line the same length as that given by a horizontal standard. 20 men and 12 children from Mer were involved. There were three tasks set for the Islander. The first required the Islander to draw a vertical line starting at the centre of a
horizontal standard of 100mm. The second task required him to start at the end of the standard. And the third required him to draw a line that passed through the centre of the standard with equal distances on either side – as in a cross. Data from these tests were then compared with those of 15 psychology students and 12 Girton village children.

Rivers found that both the Islander men and boys achieved an overall accuracy rate that improved over the tests. For instance, “the average length of the vertical line in No. 1 was distinctly smaller than in No. 2, and in No. 2 than in No. 3” (p. 112). The men achieved on average, 65.7mm in the first, 77.0mm in the next, and 90.1mm in the last. The boys achieved averages of 79.5mm, 84.3mm, and 99.4mm. Comparatively, the boys were more accurate in their estimates of the standard. The boy’s estimates, across all three tasks, also show them to make the vertical longer than the men. Moreover, as Rivers noted, there was a notable constancy factor. For instance, in No. 1, four men out of twenty estimated beyond 75mm whereas nine of the twelve boys estimated beyond 75mm. In other words, there was a consistency amongst the boys to estimate above 75mm whereas the consistency factor for the men was to estimate below 75mm. This told Rivers that “the illusion was apparently less marked” (p. 112) for the boys.

Data from 15 psychology students and the 12 Girton village children (see Table XIII, p. 113) also showed that all improved the accuracy of their estimates as they progressed through the tests. The Girton village children averaged 78.2 in the first, 88.7 in the second and 90.7 in the third. The psychology students averaged 89.0, 92.5, and 94.5. This, Rivers (1901) noted, was an interesting characteristic for all four groups. All “agree in making the vertical line shorter when drawn from the middle of the horizontal line than when drawn at one end, and shorter in the latter for of the tests than when it is drawn so as to form a cross” (p. 114). Notably, for Rivers, the psychology students were more accurate in the average scores than the Girton village children and the Islander children, and even more so than the Islander men.
However, the constancy factors were also important. As Rivers noted, when the mean deviation from the average is considered, it can be clearly seen that “the illusion was most marked in the case of the Murray Island men”... [and by contrast], “[t]he illusion was least pronounced in the case of the psychology students” (p. 113). That is, when each Islander man’s attempt is considered against the average of the whole group of Islanders - M.V. - the figures come up as 10.13 in the first, 7.85 in the second and 9.75 in the third. The psychology students’ figures were 5.73, 4.37, and 3.43. Rivers offered a few explanations for this. One he noted was that some participants in England who had done the first test used a mode that divided the standard into two halves wherein they gained some correspondence for their vertical estimates, “[t]his observation illustrates very well one cause of difference between the results of the savage and the cultured measurements, for one may feel fairly confident that such an artificial method was not employed by the Murray Islander” (p. 114). This helps to explain perhaps the means by which the English participants come by their accurate measurements but it says little about the constancy factors.

However, the consistency with which the Islander men provided their estimates in each was considered. And from this, Rivers discovered that seventeen of the twenty men displayed the characteristic increases in their measures over the three tasks whereas only eight of the fifteen students did. His explanation was thus: “I am inclined to ascribe this result to the influence of a factor, viz. Knowledge of the nature of the illusion, which is not present in the savage” (p. 115). That is, with both conclusions Rivers presents the cultural attributes of the English participants as on a higher plane whilst describing the Islanders achievements as savage-like. The categories of ‘civilised’ and ‘savage’ thus prefigure the test and all the findings are aligned to this polarity. This is the case even where the data does not support such a distinct difference in performance.
The generalisation drawn from Rivers' methodology and orientation to the data is that there were more differences in achieving the averages by Islanders than there were by the psychology students. There was more consistency amongst the Islanders in achieving their characteristic trends across the three tasks than the psychology students. But more important is the changing normative factors in each of these comparisons. The 100mm might have been the standard used for the tests but the interpretations made are based on various normative positions depending on what the data was compared with. And, as is evident from the process outlined above, no matter what comparisons were made the findings were interpreted by recourse to a 'them' and 'us' schema.

Rivers (1901) went on to consider the views of others and their explanations as to “the cause of the erroneous estimation of vertical as compared with horizontal distances” (p. 116). Some, he noted, accepted the view that this was because of “the curvature of the retina... [particularly when] the retina is more concave in one meridian than in the other” (p. 116). Others accepted the more popular view “which refers the illusion to the influence of eye movements” (p. 116). This view was based on the idea that the muscles that control the vertical eye movements are greater than the ones that control the horizontal movements. Another view considered the oval shape of the field of vision one gets from monocular vision and binocular vision. This view suggested that it is “possible that a vertical distance may be overestimated as compared with an equal horizontal distance because it forms a larger proportion of the field of vision” (p. 116). To others, erratic estimations of vertical lines from a horizontal standard are caused by psychological tendencies because it is supposed by people like Lipps (1891), “that we ascribe certain mechanical activities to geometrical figures and... that we ascribe activity more readily to vertical than to horizontal lines (Lipps cited in Rivers, 1901, p. 116). Rivers, however, remains unconvinced, and is moved to suggest that,
The pronounced character of the illusion in children and in people in the stage of mental culture of the Murray Islanders shows that the illusion is primitive and deeply seated, and that its source is to be sought in some physiological condition, or if it is at present necessary to be content with a psychological explanation, this must be of a simple and primitive character. (Rivers, 1901, pp. 116-7)

Nowhere in Rivers' research is there evidence that suggests that the stage of mental culture for Islanders is primitive. Explanations that link the data to notions of 'simplicity' and 'primitiveness' go beyond what the findings can deliver even within their own scientific terms. What it does suggest, however, is that the distinction made between 'civilised' and 'savage' has an inscrutable impact on both methodology and the outcomes.

Estimation of Horizontal Lines

The Muller-Lyer Illusion test was another used by Rivers (see Fig. 2, 1901, p. 117) to gauge visual spatial perceptions. The apparatus used in this test was a sliding rule. A standard length, 75mm, was positioned on the sliding scale and the participant was then required to slide the scale the same length as the standard 75mm by estimating how far to slide the measure. Participants were required to estimate the standard in two different ways by sliding the scale in to shorten the measure and by sliding it out to lengthen the measure. The first results of 19 Mer men tested are provided in Table XIV (p. 119). They indicate that on average across all ten attempts the Islanders scored 60.29mm. Five of their attempts made, when the slide rule had to be shortened, were on average 62.45mm in length, and showed an average mean variation of 3.057. When the rule was lengthened the estimates were significantly different. Of the second five attempts, the 19 men estimated the length, on average, to be 58.13mm with an average mean variation of 2.305. Rivers observed that the Islander men were definitely influenced by the direction the slide rule had to be moved to, but he suggested they were "influenced to a considerable extent by the position of the slide at the beginning" (p. 120). In addition, Rivers
pointed out that the estimates were consistently longer when the rule was shortened (62.45mm) and not as long (58.13mm) when it was lengthened. He retried this test in reverse order to test whether any change in order affected the trend. This was not found to be so and thus affirmed an Islander characteristic for Rivers.

The 10 Mer boys (10-13yrs), by contrast, achieved an overall average score of 61.16mm (75mm standard) after ten attempts - slightly longer than the 19 men’s average of 60.29. Their first five attempts moving the slide one way showed an average score of 62.06mm (men’s 62.45) with an average variation between estimates to be 2.296, whilst the second five attempts showed an average of 60.26mm (men’s 58.13) and a variation of 1.856 when required to move the slide in the opposite direction. Two other boys were tested in reverse order to test the characteristic trend. Again, it reaffirmed a tendency to make the estimate longer when the rule was shortened and not as long when lengthened. But, it was significant that results from five of the twelve boys did not correspond to the characteristic trend.

The data from tests on 9 Islander girls aged between 10 and 14 were, by contrast, corresponded with each other uniformly and were characteristic of the overall trends. Moreover, they appeared to have outscored the men as well as the boys. The average score for their ten attempts was 62.55mm (boy’s 61.16; men’s 60.29). The average of the first five tests when moving the slide rule one way was 64.47mm (boy’s 62.06; men’s 62.45). The second five attempts that the slide rule was to be moved in the opposite direction showed an average score of 60.64 (boy’s 60.26; men’s 58.13). The girls from Mer showed overall that they were more accurate with their estimates. The constancy factor was also superior. Attempts by the girls varied from their group’s average by 2.68 and 1.62 over both tests, whereas the boys varied by 2.296 and 1.856 and the men varied by 3.057 and 2.305. In regards to a measure of visual spatial perception, smaller variations equate to more constancy. The girls were, in this sense, the most accurate.
When the results were compared with those in the West, the Islanders were found to be more accurate with their estimates than their English counterparts. Rivers (1901) acknowledged that, at first glance, "[t]he illusion appears to be distinctly less marked to Murray Islanders than to the Europeans. This is shown not only by the average but by the maximum and minimum observations, and also by the median observations, which differ but slightly from the averages" (p. 125). However, to Rivers, the constancy factors needed to be considered in more detail. Whilst advantages can be seen in that the Islanders scored with a greater accuracy than the English, the English showed greater consistency in achieving their average scores. For example, as can be seen on Table XVIII (p. 124), variations in the Islanders' estimate of their first five attempts, when moving the slide one way, show an average estimate of 62.8 mm with an average mean variation of 2.77. And, when the slide was moved in the opposite direction in their second five attempts, the average estimate was 59.3 mm with an average mean variation of 2.03. By contrast, the English achievements were 2.09 and 1.58. These figures were distinctly smaller than the Islanders were. This, in effect, meant that the English were more consistent with achieving their averages for the first five attempts as they did in their second five attempts. There was more of a disparity to see, Rivers noted, between the Islander men and a group of English students who were most familiar with the exercise. The Islander men had a mean variation of 3.06 and 2.3 in achieving their average score whereas the English students achieved 1.79 and 1.42 in theirs. However, when all of the Islanders were compared with the English, "Islanders show[ed] that they performed the operations involved in the test with a degree of constancy and accuracy, slightly inferior to an equal number of English people" (p. 125).

However, Rivers is left with a particular problem. Whilst the English had the advantage when mean variations are considered against the average estimates achieved in each of the two tests, a different picture emerges when individual estimates are considered against the combined averages of the two tests. The variation amongst the Islander estimates, for instance, when correlated with
the collective average of both tests 61.1mm showed a constancy factor, or a (M.V.), of 3.89. According to Rivers, the “M.V. is an index of the variability of the individuals within each group” (p. 127). The degree of variance amongst the English individuals then in achieving the overall average of 55.6mm was greater. They scored a M.V. figure of 5.02. There was more constancy amongst the Islander people in achieving the overall average than the English and, in effect, meant that Islanders were more accurate and less prone to seeing an illusion.

In light of this Rivers (1901) acknowledged that Islanders “gave results which were more consistent with one another than those of an almost equal number of English people, and the group of Murray Island men varied from one another very much less than the group of practised English observers” (p. 127). This was difficult for him to explain. But, as he suggested, perhaps

This is another example of the fact that in some respects the unpractised and wholly ignorant inhabitants of Murray Island give more consistent results than Europeans practised in psychological observation. In the introduction I [Rivers] suggested that the greater consistence [sic] of the Murray Islanders may have been due to their total ignorance and to the fact that they gave their whole minds to the special attention they had to perform, and were not influenced by speculations founded on knowledge, in this case on knowledge of the illusion. (Rivers, 1901, p. 127)

These Islanders again are explained away by reference to those ‘practised in psychological observation’. In Table XVII, Rivers separated off “students and others well acquainted with the illusion” (1901, p. 124) so that he could indeed make such comparisons between them and Islanders. And from this, he found that it was “the difference between the Murray Island men and the English group A (all practised observers) which make the average mean variation of the English observers superior to that of the [Islanders]” (p. 125). What Rivers is struggling to explain is the extent to which Islanders were
more consistent with each other in their estimates than all of the English in achieving the combined average of both tests. That is, the English were not only affected by illusion more, they were more erratic with their tasks. Rivers speculated “it is possible that in the simpler mental features they [Islanders] may present more uniformity than is found among the members of a highly civilised community” (p. 127). However, what is even more telling is his resolve in this concluding statement:

The very slight inferiority to the English observers in accuracy as shown by a comparison of the average mean variations (m.v.) and the remarkable correspondence of the three Murray Island groups with one another would have been impossible if the Murray Islanders had not applied their full attention to their tasks or if they had failed to understand what they were told to do. (pp. 127-8)

There is nothing in this explanation that implicates the psychological aspects of different groups of people. By quantifying the estimates offered by Islanders, Rivers had hoped to gain some measure of the psychological disposition of Islanders comparing them with the normative positions of those in the West. Rivers should have been able to interpret and compare the score of the Islanders and the English “both by the smallness of the mean variations and by the general consistency of the results” (p. 127). He seemed unable to do this in a neutral way or in a way that prioritised any Islander attributes. Instead all findings were reinterpreted in order to make consistent the inferior position of the ‘savage’ Islander.

There is little substantive data in Rivers’ study that proves superiority or inferiority. However, there are persistent references to Islanders as ‘lower race’ people and the superiority of the Europeans. Even when Rivers reveals his uncertainties in relation to other studies in the literature, he struggles to provide something of substance about the psychology of the Islander. In fact, the data presented by Rivers that may be regarded as reliable as a
comparative - in the sense that both the Islander and the English people were subjected to the same tests - shows that Islanders were affected by the modified Masson's Disc as much as the English people were affected. It also shows from the one case found on Mer, that the frequency of colour-blindness is not a common feature of the Islanders. That the colour nomenclature for blue is not fully developed (although this is open to challenge). That the "Islander is relatively more sensitive to red than the Englishman, and distinctly less sensitive to blue" (p. 73). That Islanders were able to see contrasting colours "less readily than the average European" (p. 81). None of these conclusions tells us anything about the psychological capabilities of the Islander people let alone is sufficient to compare Islanders to the psyche of Europeans.

However marked the especial interests of the experts, it is the epistemological schema of these Reports that explains the orientation of their generalisations. These scholars, and their Reports belonged to an era of exploration of exotic worlds that although supportive, judged the 'unknown' in the world according to the order of things in their own so-called 'civilised' world. It is under these conditions that science operates to form the constitutional characteristics of primitive minds and cultures.

To cover all the aspects of the senses the expedition team moved to experiment with and document the Islander hearing, smell, taste, touch, muscular sense, blood pressure, and reaction-times. Once again, as many aspects of the senses as possible were tested in order to gain an idea of how the Islander psyche functioned. The experiments involved the introduction of measures from the West, and an assessment of the degree to which Islanders had been influenced by the West. Myers and McDougall's, Report on the Hearing, Smell and Touch senses of Islanders, however, sits in stark contrast to Rivers' findings that condemned Islanders as 'Savages' with primitive minds.
**B. Hearing**

Like Rivers, Myers (1903) moved first to identify pathological conditions of the ears of Islanders on Mer that could affect the Islanders' hearing capacity. The Islanders were found to be in good health and only one case of discharge from the ear, or otorrhoea, was identified. An outbreak of measles some years prior was suspected by Myers to be partially responsible for some deafness in the community. However, as far as the adult members in the Islands were concerned, a more likely reason was the extent of the diving required by the commercial marine industries.

> Until the recent legislation enacted by the Queensland Government, natives were induced to dive, without dress or helmet, into such deep water that deaths were of frequent occurrence. At the time of our visit, the hospital at Thursday Island contained several cases of paralysis, which had arisen from diving in excessively deep water. (Myers, 1903, p. 142)

Myers was in no doubt about the extent of deafness from this kind of diving. He tested 18 divers and found that almost half had defective hearing in one ear and a couple who had the same problem with both ears. Indeed, from all his tests on hearing, including those on children, he was “forced to conclude that the general auditory acuity of islanders [sic] in the Torres Strait is inferior to that of the Europeans” (p. 148).

**Auditory Acuity**

Common amongst travellers of the world then was a view of “the remarkable capacity possessed by primitive people for distinguishing faint sound amid familiar surroundings” (Myers, 1903, p. 143). Myers pointed to two cases in particular. Laszlo Magyar who had visited the Kimbunda people in South Africa spoke of this remarkable capacity, “they are able to distinguish very accurately sounds which are heard from a great distance, and at once recognize [sic] their nature and direction” (cited by Myers, 1903, p. 143). P. Paulitschke visited Somalia and “found the Somali hunters to have a very
delicate sense of hearing, the slightest noise awakening their attention, its
direction being recognized [sic] with certainty" (1903, p. 143). But, there is as
much from other travellers who contradict this view by arguing that all people
hear and become accustomed to sounds, just as well, in their own
environments. Generally, however, "[w]e need but imagine such an individual
transported to the streets of a busy city, to obtain a complete reversal of the
phenomena, the primitive man heedlessly passing various noises which could
be full of significance to his more civilized [sic] companion" (p. 143). Myers
(1903) believed that the common opinions of fellow travellers had little
scientific basis. He could find only two experimental studies of indigenous
peoples around the globe by Gilschenko and Hyades. The first heralded
extraordinary capabilities, and the second maintained ordinary capacities. For
these reasons, Myers pursued tests to provide a measure of the auditory
acuity, the upper limit of hearing and the smallest perceptible difference of
two different tone by "subjecting the ear to a definite test" (p. 143).

Myers (1903) had three available methods of testing auditory acuity. The first
was to use a telescope where, with the lens removed and placed in the vertical
position, a small pith-ball can be dropped through the small opening onto a
piece of felt fixed at the other end. As he says, "[t]he velocity of the fall of
the ball, and hence the intensity of the sound produced by its impact against
the felt-disc, could be varied at will by altering the height of the telescopic
tube" (p. 144). He also had available Politizer's, Hormesser. This is an
apparatus made up of a hollow steel cylinder and a hammer that falls from a
fixed height. But, because of the noise of the surrounding environment,
Myers chose not to use this instrument on Mer: "Here the constant rustle of
the palm-leaves and the beating of the surf on the sea-shore compelled me to
lay aside my telescopic apparatus and Politzer's Hormesser in favour of a
stop-watch" (p. 145). He thus settled on Runne's clock. This is a particular
kind of stop-watch "which could be made to tick five times in a second, and
could be easily stopped or set going at will" (p. 145).
To moderate external noise factors, Myers tested his colleagues alongside the Islanders on Mer. It is not clear if he tested them at the same time as Islanders were being tested. No allowance is made for any different level of external noise between the two groups thus affecting the reliability of this control group. Rivers (cited in Myers, 1903), however, did find some exceptionally quiet times at Mabuiag Island where there was "almost complete silence" (p. 147). At Mabuiag he was able to test 8 out of 13 Islanders under these conditions with both Runne's clock and Politzer's Hornesser (for results see following reproduction of Table XX, p. 147).

Both Myers and Rivers compared Islanders as a group with members of the Cambridge team who became the defacto 'English' or 'civilised' group. What was investigated was thresholds or limits of hearing. The chosen apparatus was first placed in the participant's range of hearing and moved away at metre and half-metre intervals until it could not be heard. The apparatus was then placed outside the range of the participants hearing and introduced by the same method until it was heard. Five subsequent trials were made between the two points to determine a threshold. These were then listed as average scores and compared with each other. A point where Islander participants could/could not hear a Western apparatus was the basis on which comparative measures were made. The normative basis by which the Islanders' auditory acuity was measured was the familiarity of members of the Cambridge team's with their own instruments. Data from both Rivers' and Myers' experiments were compared in the following tables 1 and 2:
Table 2: Results of tests run by Runnels clock.

### Table XIX.

**Murray Island Boys, tested by Runnels Clock.**

<table>
<thead>
<tr>
<th>Date</th>
<th>Name</th>
<th>Age</th>
<th>n.</th>
<th>c. n.</th>
<th>Standard-observer</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug. 3</td>
<td>Jimmy Dawson</td>
<td>10</td>
<td>200</td>
<td>400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aug. 5</td>
<td>Jimmie</td>
<td>10</td>
<td>200</td>
<td>400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>July 9</td>
<td>Ali</td>
<td>10g</td>
<td>200</td>
<td>400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>July 3</td>
<td>Tom (Moholi)</td>
<td>11</td>
<td>250</td>
<td>400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aug. 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aug. 1</td>
<td>Marcus</td>
<td>11</td>
<td>250</td>
<td>400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>July 17</td>
<td>William (Ted)</td>
<td>17</td>
<td>250</td>
<td>400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aug. 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aug. 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>July 17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aug. 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>July 17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Murray Island Girls, tested by Runnels Clock.**

<table>
<thead>
<tr>
<th>Date</th>
<th>Name</th>
<th>Age</th>
<th>n.</th>
<th>c. n.</th>
<th>Standard-observer</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 15</td>
<td>Malea</td>
<td>11</td>
<td>200</td>
<td>400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>July 3</td>
<td>Gipil</td>
<td>11g</td>
<td>200</td>
<td>400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aug. 3</td>
<td>Nat</td>
<td>12</td>
<td>200</td>
<td>400</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>June</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Murray Island Men, tested by Runnels Clock.**

<table>
<thead>
<tr>
<th>Date</th>
<th>Name</th>
<th>Age</th>
<th>n.</th>
<th>c. n.</th>
<th>Standard-observer</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug. 3</td>
<td>Charlie</td>
<td>18</td>
<td>600</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>July 10</td>
<td>Abel</td>
<td>18</td>
<td>600</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>June</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date</th>
<th>Name</th>
<th>Age</th>
<th>n.</th>
<th>c. n.</th>
<th>Standard-observer</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug. 3</td>
<td>Thi</td>
<td>18</td>
<td>650</td>
<td>200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aug. 3</td>
<td>Ali</td>
<td>20</td>
<td>400</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aug. 2</td>
<td>Kyle</td>
<td>20</td>
<td>400</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aug. 1</td>
<td>Caro</td>
<td>20</td>
<td>400</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>July 20</td>
<td>Erokia</td>
<td>50-60</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Aug. 3, Jimmie Dawson had never dived.
- July 10, Abel had dived 6-10 ft., then lost head and mouth.
- July 10, Abel has dived 7-8 ft., then no discharge.
- July 10, Abel has dived, usual tympanic membranes.
- July 10, Abel has dived blood from nose and ears.
Table 3: Results of test by Hornesser on Mabuiag men.

Table XX

<table>
<thead>
<tr>
<th>Date</th>
<th>Name</th>
<th>Age</th>
<th>m. m.</th>
<th>m. m.</th>
<th>Standard-observer</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sept. 23</td>
<td>Josiah</td>
<td>17</td>
<td>9:00</td>
<td>7:00</td>
<td>C. G. S. m. = 9 m.</td>
<td>weather rather windy.</td>
</tr>
<tr>
<td></td>
<td>Min</td>
<td>20</td>
<td>9:00</td>
<td>7:00</td>
<td>C. G. S. m. = 9 m.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gapil</td>
<td>20</td>
<td>9:00</td>
<td>7:00</td>
<td>C. G. S. m. = 9 m.</td>
<td></td>
</tr>
<tr>
<td>Sept. 28</td>
<td>Tom</td>
<td>20</td>
<td>9:00</td>
<td>7:00</td>
<td>C. G. S. m. = 9 m.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Waris</td>
<td>25</td>
<td>9:00</td>
<td>7:00</td>
<td>C. G. S. m. = 9 m.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Harry</td>
<td>25</td>
<td>9:00</td>
<td>7:00</td>
<td>C. G. S. m. = 9 m.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Peter</td>
<td>25</td>
<td>9:00</td>
<td>7:00</td>
<td>C. G. S. m. = 9 m.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Wanie</td>
<td>25</td>
<td>9:00</td>
<td>7:00</td>
<td>C. G. S. m. = 9 m.</td>
<td></td>
</tr>
<tr>
<td>Cole. 2</td>
<td>Aly</td>
<td>25</td>
<td>9:00</td>
<td>7:00</td>
<td>C. G. S. m. = 9 m.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>William (Murray L.)</td>
<td>25</td>
<td>9:00</td>
<td>7:00</td>
<td>C. G. S. m. = 9 m.</td>
<td></td>
</tr>
</tbody>
</table>

From Tables XIX, Myers reported that 7 of the 12 boys on Mer could not hear as far as he could, and 4 of the 5 Adults could not hear as well as he did. By comparison, all of the girls on Mer could hear as far as or better than Rivers. But, as Myers pointed out, “Dr Rivers... was certainly suffering from partial deafness when these estimations were made” (p. 148). On Table XX, Rivers compared the results of Mabuiag adults with Mr Seligmann and himself. As Myers noted, “[n]ot one of the ten young Mabuiag adults [aged 17-35] with whom Mr Seligmann later compared himself, could hear as far as he could. Two others could not hear as far as Dr Rivers, whose auditory acuity even by this time had not much improved” (p. 148). Myers thus concluded: “[t]he remarkably low acuity of the general adult hearing must hence be attributed to pathological conditions. Yet as the children show a similar, although less marked, deficiency, one is forced to conclude that the general auditory acuity of the islanders [sic] in the Torres Strait is inferior to that of Europeans” (Myers, 1903, p. 148).

The rigour of these tests, the reliability of the comparisons and the validity of the test instruments are all clearly questionable. Moreover, an examination of the ‘Standard-observer’ column of the findings provides some idea of the
normative basis upon which the aforementioned findings were made. In the first comparison of Myers, the 12 boys are compared with: one “not quite equal to CSM”; two “same as CSM”; one “worse than CSM”; one “much worse than CSM”; one “L.E. [left ear] of CSM”; two “L.E. (left ears of both) CSM and WHRR”; and so forth. Comparisons made of the data in these ways, with no corresponding values, are shaky and depend too much on the members of the Cambridge expedition. Except for one item on Table XX - CGS R.E=8m and L.E.=9m – it can be presumed that the auditory acuity of each of the team members was the same in both ears. The rate of exact scores for both ears – B.E. – amongst the research team was recorded no less than 13 times. In contrast to this, 5 of the 12 boys on Mer did. 1 of the 7 girls on Mer did. 4 of the 16 men on Mer did. And, on Mabuiag, of the 13 participants, 2 did. Clearly Myers and Rivers were basing their findings on fragile grounds. Moreover, this process illustrates again the degree to which Islanders’ capabilities were diminished by reference to Western norms. Thus, Islanders, it was found, did not have animal-like qualities as supposed by fellow travellers (i.e. higher-order hearing skills) but were found to have a level of acuity well below what constituted the norm for civilised peoples.

The Upper Limit of Hearing

Myers (1903) went on to test the Islanders’ upper limit of hearing. For this test, he used a Galton whistle. This is a tube-like instrument, with a one-millimetre bore, and “[I]ts length can be varied by sliding in or out the solid rod which closely fitted the tube of the whistle” (p. 149). Attached to this rod was a device that provided a measure, in millimetres, any position the rod is placed along the whistle. The researcher began first by blowing the whistle with the rod fully extended and slowly slid it into the whistle until no audible whistle-note could be heard. He then blew again but this time he slid the rod out of the whistle until the first audible note could be heard. After five attempts like this an average was taken and this became a measure of the upper limit of hearing for that day. (Myers tested the same person on another day and found different averages). It thus enabled the upper limit of hearing
to be measured in millimetres. The results, when compared with similar tests done on the people of Aberdeenshire, Scotland, indicated small differences between the two groups, "this small difference is in favour of the latter" (p. 152). Myers also observed a distinct pattern in the data that suggested to him that "children of both communities hear a higher tone than the adults, the upperlimit of hearing becoming gradually lower with increase of years" (p. 154). This can be seen in the following reproduction of Table XXII.
Table 4: Comparative data on Islanders and people from Aberdeenshire.

The table here shows a comparison between Islanders and people from Aberdeenshire, Scotland. The first point that needs to be made relates to the seven different groups of Islanders. Myers (1903) formed these groups according to their relative experiences with diving:

Class A comprises men who had not noticed any ill effects in the ear from diving. Those in whom diving had caused haemorrhagic or purulent discharge form one ear are grouped in Class B, a discharge from both ears in Class C, haemorrhage from the mouth and nose only in Class D. ... in Class E those whose hearing in one of both ears was defective from some other cause. The men who had never dived are in Class F. Those about whom I have no information are in Class G. (Myers, 1903, p. 152).

Of note here is the different categories used. They are determined by what Islanders could or could not recall from their diving experience and not, as Myers noted, by any physiological examination. The other significant feature to note is the comparative measures derived from Aberdeenshire, Scotland. One would expect that the two groups had similar diving experiences. That
is, for example, in Class B the comparative measure was of two different groups of people who had haemorrhages or purulent discharges caused by diving in deep water. And the next notable item is about the relative number of Islanders compared with the Scots. In Class A, 4 Islanders are compared with no Scots. Class B, 7 Islanders compared with 3 Scots. Class C, 6:5. Class D, 2:0. Class E, 6:5. Class G, 7:3. Class F, 1:1. Overall, 33 Islanders are compared with 17 Scots.

Having tabulated these results, Myers then reconfigures them. He provides a comparative table of the overall results in a new table (Table XXIII, p. 154) designated only by the different age levels to show what would be achieved if references to "any aural lesion or disease produced by diving or other causes" were omitted (p. 153). He subsequently provided another set of results (Table XXIV, p. 154) from Table XXII above to show average rates of the highest tone achieved by the different age groups. And from these, Myers concluded that "the Murray Islanders [of Mer] are very identical with those given by the people of Aberdeenshire" (1903, p. 154).

However, despite this conclusion, from the outset there existed no valid position by which the Scots could be compared with the Islanders. His consideration of some of the variables that debilitated the hearing capacity of the participants in his study was meaningful. Less meaningful was the suggestion that the study could be based on what Islanders told him about their hearing experiences, and not on any physical examination by him. Furthermore, comparative figures based on twice as many Islanders than Scots weakened his results. The ignoring of these weaknesses to his study in favour of overall results does not present a solid basis for Myers' findings. In this study, as in other ones done by the Cambridge group, there is evidence of a tension which undermines the research as a whole. On the one hand, there is an earnest desire to situate the Islanders in their own environment yet on the other hand, all measures used to understand Islanders favour instruments, methods and norms imported from the West.
The Smallest Perceptible Tone-Difference.

Myers (1903) went on to determine the smallest perceptible tone-difference that could be identified by the Islander: "[f]or it be supposed that smaller intervals are employed by primitive than by civilized [sic] communities... we should expect them to show evidence of extremely high sensibility to minute differences of pitch" (p. 168).

Two tuning forks were used in this experiment to ascertain the Islanders' ability to detect the smallest perceptible tone-difference between them. The first was of a fixed kind at 256 vibrations per second. The second was also of the same pitch but one where a sliding metal bar was attached to one of its forks to vary the interval times. The Islanders, upon hearing the sounds of two selected forks, were to respond thus: "first one high, or second one high, or both all same" (p. 158). In all, 12 children and 21 adults were tested on Mer and in Aberdeenshire, Scotland. As regards some of the adult Islanders, Myers was left in "no doubt that in these experiments their judgment [sic] of pitch differences was being exercised for the first time" (p. 159). The folk of Aberdeenshire, however, "belonged to a highly educated class. Six of them played a musical instrument, and of these three had had the valuable previous experience of tuning the violin, and one of the violoncello... But I [Myers] ought to add that at most only one or two could be termed highly musical" (p. 156).

Myers (1903) tested the participants over a six week period and "[e]ach sitting lasted from twenty to thirty minutes" (p. 159). Each sitting involved many encounters with the tuning forks. The following table shows this.

Table 5: Average Number of Measurements taken in each sitting.

<table>
<thead>
<tr>
<th>Sitting 1</th>
<th>Sitting 2</th>
<th>Sitting 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

156
As we can see from this compilation of his work, Myers recorded, on average, in the first sitting 35.3 responses from 12 Islander children, 43.3 responses in the second from 10 children and, 59.3 in the third from 6 children. He recorded averages of 51.3 from 12 Scottish children in the first test, 43 from 8 in the second and, 33.25 from 4 in the third. Averages of 42.85 were obtained from 20 Islander adults on Mer in the first, 48.2 from 9 in the second and, 67.3 from 3 in the third. Averages of 44.2 encounters were recorded from 21 Scottish adults in the first, 39 from 5 in the second and, 49.3 from 3 in the third. The number of participants most certainly depleted as the tests progressed over the six-week period. But, and perhaps more notably, those Islander children and men who chose to continue with the tests endured an increasing number of tests of their ability to gauge perceptible tone-differences between two tuning forks.

Myers (1903) recorded as many as 5000 attempts to determine the least perceptible difference of pitch amongst Islanders and the Scots. The group averages in the next Table show the combined average of each of the four groups. The standard fork was set at 256 vibrations per second.
Table 6: Group averages in each sitting.

<table>
<thead>
<tr>
<th></th>
<th>Sitting 1</th>
<th>Sitting 2</th>
<th>Sitting 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total of indiv Results</td>
<td>No. of people</td>
<td>Group average</td>
</tr>
<tr>
<td>Children of Mer</td>
<td>2925</td>
<td>12</td>
<td>243.75</td>
</tr>
<tr>
<td>Men of Mer</td>
<td>4808</td>
<td>20</td>
<td>240.4</td>
</tr>
<tr>
<td>Scottish Chn</td>
<td>2944</td>
<td>12</td>
<td>245.33</td>
</tr>
<tr>
<td>Scottish Men</td>
<td>5209</td>
<td>21</td>
<td>248</td>
</tr>
</tbody>
</table>

From this compilation of figures from his study, it can be seen that the Islander children's group average in the first sitting was 243.75 which sets it 12.25 away from the standard fork set at 256 vibration per second. They managed 243.8 and 12.2 in the second, and 246.83 and 9.17 in the third. The Islander men managed 240.4:15.6; 243.66:12.34; and, 250.25:5.75. The Scottish children managed 245.33:10.67; 248.70:7.3; and, 244.75:11.25. The Scottish men managed 248:8; 248:9:7.1; and, 250.7:5.3. The following comparative table shows the group's average measure of least perceptible tone-difference from the standard of 256 vibrations per second.

Table 7: Group averages on least perceptible tone-difference.

<table>
<thead>
<tr>
<th></th>
<th>Sitting 1</th>
<th>Sitting 2</th>
<th>Sitting 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children of Mer</td>
<td>12.25</td>
<td>12.2</td>
<td>9.17</td>
</tr>
<tr>
<td>Men of Mer</td>
<td>15.6</td>
<td>12.34</td>
<td>5.75</td>
</tr>
</tbody>
</table>

158
The smaller numbers indicated that the Scots scored closer to the standard than did the Islanders. That is, as Myers concluded, the people of “Aberdeenshire surpass the people of Murray [Mer] Island in their power of distinguishing two tones of nearly identical pitch” (p. 167). However, he did make some clarifications. The first alluded to the familiarity of the Scottish adults with their musical instruments and the Islanders first encounter with a tuning fork. This, in a sense, meant that perhaps the children could only be compared. However, the second clarification he made pointed to the large discrepancy in the above Table on the number of tests taken by the Islander children and the Scottish children – 424:616. Myers (1903) thus conceded that it would be difficult “to deduce a numerical measure of relative pitch-discriminability in the primitive and civilized [sic] races” (pp. 167-8).

However, Myers did not comment on the 5000 measurements he made. Myers thought that perhaps a view to “existing difference may be gained, if we dismiss from consideration (i) the results given by those subjects, on whom the number of observations made at their first sitting did not exceed thirty, and (ii) the improved results, gained by telling the subject if his judgments [sic] were right or wrong” (p. 168). Thus huge differences could be deduced between the Islanders and the Scots. The comparative data, when re-configured, show the Mer people in the first sitting had an average score of 15.4 and the Scots had a much better average of 7.6. In the second sitting, the new figures show them to be 12.5 as opposed to 4.7.

A stark difference between the Scots and the Islanders from Mer was then made. The question that needs to be asked here is why the participants who contributed below thirty measurements had to be omitted from the overall
analysis? The reason is not immediately clear but the effect is striking. The adjustment doesn't resolve the methodological problems of this research. Moreover by making this adjustment to an already flawed comparative score, Islander participation was depleted further against an already over represented Scottish contingent. As can be seen from the Table 1 above, 12 children from Mer, in the first sitting, made 424 measurements whilst their 12 counterparts had made 616. The 21 adults from Mer made 857 whilst the 21 Scots made 929. By adjusting the figures as Myers did, the Islander overall numbers had to be reduced by a further 10 participants whilst the Scots had to reduce theirs by 3. This imbalance, though small, had dramatic effect in the results. The flawed comparative tables and the weaknesses in the methodology does not present Myers from making conclusions that advantage the 'civilised' people from the West and continue to disadvantage the 'savage' Islanders. Indeed, where necessary, adjustments were made to data to affirm differences between the two groups.

C. Smell

Myers (1903) also tested the Islanders' sense of smell and compared them with the Scots. There was a view amongst those who travelled the world that the sense of smell amongst native populations was so acute that they exceeded anything known to the Western world. There was, for instance, the view from Ribot that "in the human species savage races have a characteristic fineness of smell in which they approach the animal world" (cited by Myers, 1903, p. 169). Paulitschke held a similar view. He noted that the olfactory acuity of the Somalis "equal[ed] that of the best sporting dogs. With dilated nostrils they scent[ed] the game" (cited in Myers, 1903, p. 169). Myers then pointed to those who attributed this high sense of acuity to "the wideness and flatness of the nostrils in the lower races" (p. 169). Althaus afforded a more scientific explanation for this. He perceived that "the olfactory nerve is as highly useful to man in his natural condition as to beasts, and the peculiar pigment, which surrounds the endings of this nerve and appears to assist in an easier resorption of odorous substances, is even now better developed in
the coloured races than in the Caucasian, among whom the nerve itself appears attenuated" (cited in Myers, 1903, p. 169).

What little research there was at the time showed evidence to the contrary. Myers cited the work of Hyades amongst the Feugians in 1891 and Lombroso and Carrara's work on the Sudanese Dinkas in 1897. These studies were the first attempts at measuring levels of olfactory acuity in indigenous peoples. According to Myers, they found no instance of animal-like instincts. But, they did flag many variables in their study that inhibited any conclusive statements to be made of the acuity levels. In particular, they noted "imperfections" (p. 169) of the language of indigenous peoples as a central issue. Myers thus resolved that his study would be "directed rather to the discovery of suitable methods for future experiments than towards an estimation of the acuity of their smell-power" (p. 170). This indeed was so and all concluding statements he made were qualified by various imperfections in the tests. But he nevertheless invented tests to estimate the levels of acuity amongst Islanders, made some measurements, and reported his findings. And, this act of intervention is what is of interest to my study — to seek out how and where the Islander was positioned in his deliberations.

There were two measurements made by Myers. The first experimented with ways to estimate levels of acuity amongst Islanders. The second experimented with different scents from "Messrs Piesse and Lubin of New Bond Street, London" (p. 182) to test the Islanders memory and discrimination of odours. Both these experiments were to show that there were multiple variables at play that could complicate the identification of the sense of smell of Islanders as a racial characteristic.

Myers found from the first experiments that the Islanders' olfactory acuity was slightly higher in the Islands than in Aberdeenshire. Myers (1903) arrived at this conclusion through a round of tests. His first series of test was "to determine the approximate threshold at which the dilute acid could be
detected from water" (p. 177). This involved a solution of 5 minims of valerianic acids diluted in 15 ounces of water. This solution was then added to glass tubes in varying amounts. The first tube contained a half a dram of the diluted solution; the next would contain one dram; the next two drams, and so forth. Four tubes containing the various measures were accompanied with tubes with corresponding measures of water from the local well. The tubes were arranged in the following order starting with the smaller measures: water (w4), diluted valerianic acid (dva4), w3, dva3, dva2, w2, dva1, and w1. Fourteen boys from Mer were asked whether “they smelled water or something else in each tubes” (p. 173). They were then marked either as right or wrong and their results were recorded on Table XXIX (see Myers, 1904, p. 173). From this, he found that half the boys failed to detect “the weakest solution, a much smaller proportion with the next stronger solution, while all succeeded with the two strongest solutions” (p. 177).

The second series of test were done in the reverse order to the first “with a view to determining the differences brought about, when decreasing instead of increasing the strengths of the valerianic solutions” (p. 177). With no indication of the number of participants, Myers explained that the “resulting judgments [sic]... were not sufficiently numerous to indicate more than an approximate equality in the results given by the island [sic] adults and children” (p. 174). No data were recorded and no comparative Table constructed. He added that it was “impossible” (p. 177) to replicate the experiments in the West because there would be no comparable water sample to the ones used in the islands. To him, “[in Murray Island [Mer] everything had a smell” (p. 177). He thus passed on to the next series of tests without gathering any data because, as he remarked, he was encouraged by “the evident superiority of camphor solutions” (p. 177).

The third series of tests involved 9 men and 8 children from Mer, and four glass tubes: two filled with 4 drams of water, and the other two contained 15 and 30 minims of “filtered saturated aqueous solutions of camphor” (p. 174).
They were first given a separate solution of camphor of unknown quantity to smell and then “told that of the four tubes one or perhaps more than one tube had a camphor-like odour and that the others contained merely water” (p. 174). The Islanders had to pick out which ones contained the foreign odours. This and the following tests provided Myers some confidence and provided “greater promise of definite results than the preceding” (p. 174). From this series of tests he discovered that “[o]f nine islanders [sic] two had distinctly subnormal acuity, four were worse than, three were equal to two members of the expedition (W.H.R.R and A.C.H.), whose acuity was investigated at the same time. Of eight island [sic] children, one had distinctly subnormal acuity, five were worse than, two were better than, the same two Europeans” (p. 177). No data from the tests were provided. The standard achieved by his colleagues was also unstated. And, as he stated, no similar experiment was repeated in Scotland.

The fourth series of tests involved 16 men from Mer and 16 men from Aberdeenshire, and four glass tubes. Two contained 4 drams of rainwater and two had 7.5 minims and 3.75 minims of the camphor solution. The numbers of right answers were then listed and compared (see Table XXXI, p. 175). The results from the Table show the two groups to be almost the same. But, as Myers pointed out, the water in the islands had a smell and had to be considered as a major variable in the comparison. Myers, for instance, found that in Mer Dr. Rivers obtained 4.5 right answers for the stronger solution and 3.5 right answers for the weaker solution, in Scotland he provided “all ten answers invariably correct on three different occasions” (p. 178). However, there was a positive aspect to the difference in levels achieved by Rivers. If Rivers experienced both samples in the tests, his results may be used as the constant in making comparisons between the Islanders and the Scots. He resolved thus of 16 Islanders that “the olfactory acuity of three is decidedly defective, of seven is slightly worse than, and of six is better than his. Comparing the 16 Aberdeenshire adults... with the same standard observer, we find that the olfactory acuity of four is decidedly defective, of seven is
slightly worse than, and of five equal to or better than his” (p. 178). The Islanders’ level of acuity were measured then against a standard of 4.5 and 3.5 achieved by Rivers in the islands whilst their Scottish counterparts were compared presumably with a standard achieved by this same man in Aberdeenshire that was said to be ‘invariably correct’ at all times.

In the final series of tests, Myers (1903) involved 6 men and 12 children from Mer, and 6 men and women and 12 children from Aberdeenshire, and six glass tubes. Each tube contained graduated amounts of camphor solutions: 7.5 minims, 15 minims, 30 minims, 1 dram, 2 drams, and 4 drams. These were to test the participant’s judgements on relative strengths of camphor solutions. Or as Myers described it, “to test the discrimination of odour-strengths” (p. 178). He listed all the right and wrong answers from these tests in Table XXXII (p. 176). However, in his summaries he elected only to display the frequency of wrong answers, which he then compared. He observed from these results then that the Islander children “made fewer erroneous judgments [sic] than the Aberdeenshire children... . The Aberdeenshire adults were more successful than the Murray Island[er] adults” (p. 178). But, as he hastened to add, “the results show[ed] no remarkable differences in the behaviour of the two communities to the same experiment” (p. 178).

In his conclusion to the overall study Myers noted that insufficient number of participants limited what could be said about the data. There were two other qualifying factors. Firstly, of the 60 sets of observations made over the series of 5 tests, “no two of which are the experimental conditions the same. Secondly, in spite of these frequent modifications of experiment, I reached the close of my stay in Murray Island [Mer], as it will be seen, without having made use of a wholly satisfactory method” (p. 177). But as he pointed out, “[t]here are, however, few experiments of which it can be said that they teach nothing” (p. 177), and thus moved to present a “few general conclusions, which can be legitimately drawn concerning the comparative acuity of smell
among Murray Islanders and among Europeans" (p. 177). Myers reported thus, "[w]e may on the whole conclude, I think, that the average olfactory acuity is slightly higher in Murray Island... than in Aberdeenshire, a smaller proportion of the islanders [sic] having obtuse and a greater number having hyperacute smell-power. The average acuity of the children of both communities seems slightly higher than that of the adults" (p. 179).

However, there are two other points that need to be made about why not much can be made of the data. First, in all the above tests only the numbers of wrong or right answers were recorded - yes they can smell it, or no they can't. Second, the grounds upon which any comparative statement can be made between the two different groups of people comes primarily from the latter three tests. In the first of the three, the constant used in the comparison was Myer's two colleagues, Rivers and Haddon. However, no data on any participant in this test or his colleagues was provided and thus can not be relied on. In the next, data was provided on the levels achieved by the Islanders as well as by the Scots. Rivers was also tested when the Islanders were tested and was also tested when the Scots were tested making him a possible constant in both of the tests. His achievements were then used as the standard measure at each of the different sites. However, whilst Rivers' standard of 4.5 and 3.5 correct answers was used to gain a measure of the Islanders' achievements, no similar standard was offered in their counterparts' measurements. The standard in the latter case was, "invariably correct on three different occasions" (p. 178), and obviously deemed as sufficient information to provide a measure for the Scots. And in the final test, there was no attempt at providing a constant so there were no standards used to compare the two different groups.

Overall, then, there was no credible position by which Myers could draw any comparisons between the two groups. As for the concluding remark that "a greater number of Islanders had hyperacute smell-power" (p. 179), there was nothing conclusive in the data provided by Myers that shows this 'greater
number'. And more crucially, there was nothing that a measure of 'hyperacute' could have been based on as it refers to a measure over and above a standard level of acuity – something that was not resolved properly and cannot be resolved simply by the number of correct or incorrect answers.

The second part to the identification of Islanders' sense of smell as a racial characteristic was for Myers to test the Islanders' memory and discrimination of odours. Father Guis' wrote of his experience in Papua New Guinea and inferred that Islanders too had a delicate sense of smell that enabled them “to track a man down, some object belonging to him, preferably his garment, is procured if possible. They smell at it and then start off in pursuit of the individual, whom they will readily recognize [sic] among several others because of his odour” (cited by Myers, 1903, p. 180). Myers himself observed his “Malay boy” (p. 181) who sorted out the washing of the expedition team by smelling them. He however noted that Le Cat’s experience with the South American Indians was that, yes they did have a fine sense of smell but was convinced that “Europeans would soon acquire this power of discrimination if they lived long among savage people, and that there is nothing strange in the matter at all” (cited by Myers, 1903, p. 180). Moreover, Francis Galton taught himself “to associate two whiffs of peppermint with one whiff of camphor, three of peppermint with one of carbolic acid, and so on” (cited by Myers, 1903, p. 181). In these ways and more Galton was able to develop a sense of smell comparable with those known of indigenous populations around the globe. Myers himself then resolved that maybe “the mode of life led by primitive people and their general mental status combine to make them more aware of an attentive to the majority of external stimuli than we ourselves are” (p. 181).

Myers experiment then was to put before thirteen Islanders over a five-week period a range of scents and other substances brought in from London. They were camphor, valerianic acid, Thyme, Sandal, Benzaldehyde, Jasmine, Violet, Verbena, Heliotrope, Vanilla, Musk, Asafoetida, Caproic acid, Civet, Ocimum
sanctum, Linimentum terebinthae acetium, Phenol, Ammonia. The Islanders were then asked to identify what the various scents and substances smelt like, and to record whether they liked it or not. He found the Islanders to be independent in their judgements and not influenced at all by any suggestions. He also found that they gave responses with "surprising readiness and assurance" (p. 184) and evoked associations with the various scents and odours with such a remarkable pace that exceeded any such experiences with testing Europeans. This he thought to mention fell in line with Rivers' findings and thus the Islanders' enthusiasm was reduced to "yet another expression of the high degree to which the sensory side of mental life is elaborated among primitive peoples" (p. 185). Overall, however, "[s]o far... as these experiments go, they show that the people of the Torres Strait [sic] have much the same liking and disliking for various odours as obtains among ourselves" (p. 185).

In short, we can see here that this was an attempt by Myers to characterise Islanders with a measure of their ability to remember and discriminate between odours so that he could provide some explanation to the held view that they had a delicate sense of smell. What we ended up with in his Report was a simple categorisation of the items liked or not liked by Islanders, as well as some passing comment about their elaborated sensory capabilities of which nothing could be derived from the test he conducted.

The point to be made for this study is that we have here one of the more positive contributions in the Haddon Reports to put Islanders in a better light than being animal-like. But the emphasis is on innovations in scientific experiments maintained throughout his tests and thus the little regard to the credibility of their findings.

D. Taste
Myers tested seven adults on Mer with solutions of sugar, salt, acetic acid, and quinine. Seligmann carried out the same test on Mabuiag Island. The
solution was wiped onto the individual's tongue and he (they were all male) had to report on what was “the nature of the taste” (1903, p. 186). The following Table provides data gathered by Myers and Seligmann as they grouped them with the exception of the word for bitter.

Table 8: English translations from Myers as well as Ray's dictionaries of the languages.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Mer</th>
<th>Mabuiag</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sugar</td>
<td>Good taste, and fully ripe</td>
<td>Good taste, good water, good tasty water, something with a really nice taste, honey comb, the juice of a coconut</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salt</td>
<td>A variety of coconut with a bitter husk; bitter, acid; like sea water; and unripe fruit.</td>
<td>Salt water; good thing.</td>
</tr>
<tr>
<td>Acetic acid</td>
<td>Like unripe fruit; juicy or juice of sour fruit; unripe fruit; hot fire; biting like when eating chilli; and bitter.</td>
<td>To pinch (presumably this was meant to bite); bad black bee; strong taste; bad to go down (throat).</td>
</tr>
<tr>
<td>Quinine</td>
<td>Like milk from a broken stem of a plant; like seawater; bitter; and biting.</td>
<td>Bile-like; salt water; thing with strong taste; and bitter.</td>
</tr>
</tbody>
</table>

Myers noted of both studies that “[s]weetness has the best defined taste word, saltiness comes next. Acidity appears to have even a less definite name in
Mabuiag than in Murray Island [Mer]” (p. 187). But what attracted Myers
attention was the “absence of a distinctive word for bitter [to describe the
taste of quinine]…. Several Aberdeenshire adults whom I tested had precisely
the same difficulty as the Murray [Mer] Islanders in giving a name to the taste
of the bitter solution” (p. 188). He went on to point out its scientific
significance: “It is… remarkable that there should often be no distinctive
word for bitterness, the sensation of which is now regarded with such
unanimity by physiologists as sui generis, differing from other taste-sensations
as widely as the sensation of blue differs from that of red. A similar state of
things has been already met with in the colour-vocabularies of primitive folk”
(p. 188). This indeed may be quite a revealing issue for Myers. However, on
checking his team member’s (Sidney Ray) dictionary on the Islander
languages, I was able to include translations for Islander words in their data as
meaning bitter - words Myers and Seligmann chose not to offer any
explanation for in their Report. All of the data on taste as Myers and
Seligmann grouped them are now shown in the above Table. And as can be
seen from this Table, the inclusion of a term for bitter now means there can
be no such case to make about primitive folk.

E. Cutaneous Sensations

Four individual studies were done by McDougall to obtain a measure of
cutaneous sensations. The first was on tactile discrimination. The second
attempted to document whether Islanders could identify an area of skin
touched by him. The third was to map temperature spots in the skin, and the
fourth was to gauge the Islanders’ sensibility to pain. As McDougall (1903)
reminded us, “it was a principal object of our work to discover, if possible,
racial characteristics” (p. 189) of the Islanders.

The Delicacy of Tactile Discrimination

To test the delicacy of tactile discrimination, McDougall (1903) used a small
pair of carpenter’s dividers. This particular divider had its points rounded and
the distance between them measurable in millimetres. He began first by
prodding the Islanders on the “forearm... the nape of the neck... the palmar surface of the terminal phalanx of the thumb... and... the inner surface of the pulp of the second toe” (p. 191). But later, he resolved that prod ding the skin of the forearm and the nape of the neck with the carpenter’s dividers was sufficient for his study. The dual point of the divider and its adjustable features enabled McDougall to find a threshold “at which they yield a sensation perceptibly different from that yielded by a single point” (p. 190). The distance between the points of the divider was reduced successively by 20-30 percent to the previous setting. In pragmatic terms, the threshold was determined thus: “If in the series of ten double touches only one wrong answer was given I went on to the next step and usually found then a large proportion of wrong answers. The mean between the distances of the last two steps was then accepted as representing the threshold” (p. 190).

McDougall (1903) found from his study that the Islanders’ threshold for identifying two points when the divider was at its closest was half that of the working class English person - that is, the Islanders’ “power of discrimination is about double that of the Englishman” (p. 192).

Table 9: Comparing the average threshold for participants.

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Boys</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Forearm</td>
<td>Nape of Neck</td>
</tr>
<tr>
<td>Mer</td>
<td>50</td>
<td>19.8</td>
</tr>
<tr>
<td>English</td>
<td>23</td>
<td>44.6</td>
</tr>
<tr>
<td></td>
<td>40.6</td>
<td>54.1</td>
</tr>
<tr>
<td>--------------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Weber's</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Europeans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Landois'</td>
<td>45.1</td>
<td>54.1</td>
</tr>
<tr>
<td>Europeans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sarawak</td>
<td>10</td>
<td>35</td>
</tr>
</tbody>
</table>

In other words, from the above Table we can see that data from the 50 Islander men indicated that they could identify the two points of the divider when they were only 19.8mm apart on the forearm and 11.6mm apart when used on the nape of the neck. By the same method, McDougall was able to identify from 23 English men that they could identify the two points when used on the forearm at 44.6mm apart. Data from the application to the nape of the neck suggest that 19 English men could identify two points when the distance between them was 20.8mm.

However, there was some uncertainty to interpretations made from an unequal number of participants: Data from 50 Islander men cannot be compared with data from 23 English men in one test and 19 in the other. McDougall thus attempted to provide data from other studies to provide some reassurance that the averages of those in the West were reached through his study. He cited from Weber’s study of an unknown number of Europeans that their average on the forearm was 40.6mm. And he cited Landois’ study also of an unknown number of Europeans that their average was 45.1mm. But as data from both these studies also showed, the average of 54.1mm achieved from tests done by Weber and Landois on the neck is way over that (20.8mm) found by McDougall in his study of the English. And, it thus raises some concern about whether he had reached an average for the English. In any regard, the huge margin between those in the West and Islanders does not change his view on the general trends. Indeed, he went on
to remark that it was “noteworthy that, while among 23 Englishmen only three gave thresholds for the skin of the forearm of less than 10mm... among 50 Murray [Mer] men 7 gave thresholds of less than 10mm. This may have been a revealing issue for McDougall but the actual percentage of men who achieved this were relatively the same: 3 of 23 English equates to 13.04% of them achieving less than 10mm; 7 of 50 Islanders equates to 14% who achieved less than 10mm.

The final twist comes when McDougall suggested that the Islanders be compared further with 10 Sea-Dayaks or Ibans of Sarawak” (p. 193). The people of Sarawak achieved an average of 35mm when the divider was applied to the forearm. But, as McDougall remarked, the more telling story lay within the top ten thresholds of both groups. If the highest thresholds were considered from the top ten people from Mer and compared with the top ten of Sarawak, it would be seen that the Islanders still maintain a lower average. And it is this final element that McDougall concluded “that this delicacy of tactile discrimination constitutes a racial characteristics” (p. 193). In other words, it was not that Islanders were able to distinguish two points of a divider when they were prodded on the forearm and the nape of their neck that counted but how these sensibilities weighed up with the experiences of others. And it was through the latter means that McDougall turned Islander achievements in the tests into a racial characteristic.

*Localisation of Point of Skin Touched*

McDougall (1903) went on to test the Islanders’ “power of localization [sic] of a point on the skin” (p. 193) after it had been touched. In this experiment 20 Islanders held a pointing in the right hand rod and had to have their eyes closed whereupon McDougall with a similar rod would touch a point along the left forearm when at rest with the palm side up. The Islanders would then open their eyes and using the rod in his/her right hand to identify the point of skin touched by McDougall. Each Islander endured no less than thirty tests. The results of his experiment, says McDougall, served no “especial interest
and do not lend themselves to tabular statements" (p. 193). Although no data was provided, he did make some observations of the tendencies of errors that “were preponderantly in the direction of the long axis of the arm, either upward or downward, and in most the accuracy was greatest in the region just above the wrist” (p. 193). The Islander participation again is noted but their achievements are not recorded because as he conceded “[t]here was no certainly reconizable [sic] correlation between the accuracy of tactile localization [sic] and the delicacy of tactile discrimination” (p. 193). At least then we are not left in any doubt about whose interests these tests were conducted for.

**Temperature Spots**

McDougall (1903) also sought to identify temperature spots in the Islander’s skin but he was unable to make a full assessment of these. Four individuals who were tested to his satisfaction for cold spots showed that the distribution “over an area of four square centimetres... presented no peculiar features and the spots seemed entirely similar in every way to those of English subjects” (p. 194).

**Sensibility to Pain**

In his fourth and final experiment to chart cutaneous sensations, McDougall (1903) attempted to measure the Islander’s sensibility to pain. The perception amongst the more-civilised worlds was that “savages in general are less susceptible to pain than white men” (p. 194). To obtain a measure of the Islanders’ sensibility to pain, McDougall used an algometer “devised by Prof. Cattell” (p. 194). This involved pushing an ebonite rod, with a flattened point 9mm in diameter, through the middle of the instrument which is pressured by springs so when downward pressure is made onto the skin surface one can obtain readings in kilograms.

His initial attempts involved “a single application to the nail of either thumb, of either forefinger, and of either great toe, and to the skin of the small
hollow just above the patella of either knees... and two applications to the forehead on adjoining spots in the middle line just above the glabella [the area between the eyebrows] and two to the sternum [breastbone] in the middle line” (p. 194). He found that thresholds were much the same from the different areas and subsequently moved to concentrate his examinations “to the nails of the thumbs and forefingers and to the forehead” (p. 194).

McDougall’s (1903) results showed that 47 men from Mer yelled out stop after an average of 6.7kgs was applied to the thumb nails; 5.5kgs to the forefinger nail; and 6.2kgs to the forehead. Similarly, 18 boys (10-14yrs) of Mer yelled stop after an average of 3.8kgs was applied to the thumb nails, and 3.3kgs to the forefinger nails. No reading was provided for the tests on the boy’s forehead. By contrast, the 23 Englishman yelled stop earlier after an average of 3.8kgs was applied to the thumb nails, 3.6kgs to the forefinger nails, and 3.8kgs to the forehead. The English boys (13-14yrs) similarly were less inclined to the pressures and succumbed after an average of 2.9kgs was applied to the thumb nails and 2.4kgs to the forefinger nails. No results are given on tests to the forehead. When McDougall compared the men from England and the Torres Strait he concluded that,

while their average threshold of tactile discrimination is only about half as high, their average threshold for skin pain... is nearly double that of the Englishmen; or expressing the difference in other words and more loosely, we may say of these Murray men that their sense of touch is twice as delicate as that of the Englishmen, while their susceptibility to pain is hardly half as great” (p. 195).

In short, McDougall found from this series of tests support for the held view that the Islanders’ sensibility to pain was not as susceptible as they were to those in the West. He found too that their delicacy with tactile discrimination was double that of the Englishmen. No further support could be found from his two other tests on temperature spots and localisation of point of skin
touched. Nevertheless, the Islanders certainly had the better scores in the comparison, and by scoring so differently from those from the West, they certainly fitted the view of Savages so held by the more civilised ones—difference thus equated to all things not civilised.

_F. Muscular Sense_

McDougall (1903) set about a study of muscular sense to determine thresholds for the discrimination of small weight differences. This involved Islanders estimating the weight in tin cans of the same size. There were 11 tin cans in all and each had their weight graduated by 10 grams. The Islander was given first the heaviest and lightest can and then asked to say which was the heavier. In each of the subsequent steps, the weight differences of each can were reduced until the least perceptible difference in weight could be determined. As the participant neared his/her limit, McDougall determined that the proportion of right and wrong answers would become his gauge for measuring the participant’s ability to discriminate between small differences in weight. He admitted that this was an arbitrary device but argued that it could be relied on because of the latter part of his proposed measure.

A difference evoking five right and one wrong answer was held to be a difference above the threshold, i.e. greater than the least perceptible difference.... Five right and two wrong answers were held to indicate the threshold, and if the proportion of wrong answers was larger than this, this difference was held to be below the threshold, and the mean of this difference and that of the preceding step was chosen to represent the value of the threshold.

The Islanders’ ability to tell differences of weight in the cans were thus to be measured by a measure of right and wrong answers as determined by McDougall. It too was the device that enabled him to compare Islanders with the English. With no data provided by him from the actual tests, McDougall announced the following:
Of 19 boys and 45 men the average least perceptible difference was almost exactly the same in the two groups. I therefore put them together and give the average least perceptible difference of 64 Murray [Mer] Islanders, namely 27.2 grms. (median 25 grms., extremes 10 and 55 grms.). If then we take 850 grms. as the mean value of the weights compared, the average least perceptible difference equals 3.2% of the total weight.

For comparison with this result I give the corresponding average least perceptible difference of 30 Englishmen, namely 33.3 grms. (median 35 grms., extremes 10 and 50 grms.) which is 3.9% of the total weight. (McDougall, 1903, p. 198)

In the above comparison we first have to accept what McDougall 'gives' as the sum total of the two groups. We also then have to accept that the results of 64 Islanders are comparable to 30 Englishmen. Indeed, before both these considerations, we have to accept his device for locating the thresholds. And if we do, we will then most certainly agree with him that the English did better than the Islanders.

The Degree of the Size-Weight Illusion.

In another experiment, McDougall (1903) tested 21 men, 21 boys and 13 women and girls in the islands on the effects of size-weight illusion. Two series of tests were made.

In the first, there was a large tin 10cm in diameter and 16cm in height and a set of smaller tins, which measured 7cms in diameter and 11cms in height. The large tin was used as the constant and weighed 32 ounces. The smaller ones had their weight varied. One was set at 32 ounces and the others were reduced in steps of 2 ounces. The test began with the large tin being presented with the smaller one of the same weight. The Islanders were then asked to hold each can in turn in the palm of his/her hand and to say which was heavier. McDougall found that the Islanders considered the smaller one to be heavier at all times. The variable cans were then reduced in steps of 2
ounces until the Islanders could say that the smaller one was heavier than the large tin. This experiment was to give McDougall some measure of the visual as well as the kinaesthetic influence on their judgements.

The second test involved the same cans and the same procedures. However, the difference was that the Islanders had to lift the can by a piece of string. To McDougall this allowed him to gain some measure of the effects of the illusion through sight alone.

McDougall then had to devise a normative position by which he could gain a measure of the judgements.

When the subject pronounced the smaller tin to be equal to the larger or was undecided, the difference of weight between the large tin and that smaller one was taken as measure of the extent of the illusion produced in him. When the subject pronounced one small tin to be heavier than the large tin and the small tin next in descending order to be lighter, the mean of the weights of these two small tins was subtracted from that of the large tin and the difference was taken as the measure of the extent of the illusion.

McDougall (1903) found from these two tests that although the results corresponded in much the same way the illusion was “greater by both sight and by grasp than when by sight alone” (p. 199). It is interesting to note here the limited data provided by McDougall, and particularly the little provided on the English.

Table 10: Compilation of data provided by McDougall for both tests.

<table>
<thead>
<tr>
<th>36 Men of Mer</th>
<th>21 Boys of Mer</th>
<th>13 Women of Mer</th>
<th>20 Englishmen</th>
</tr>
</thead>
</table>

177
The average weight equated to the large tin of 32 ounces

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The difference being his measure of the illusion</td>
<td>7.6</td>
<td>8.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The median and extremes of judgments</td>
<td>M7 E15/1</td>
<td>M8 E15/1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>As a percentage of the large tin of 32 ounces</td>
<td>23.7%</td>
<td>26%</td>
<td>23.1%</td>
<td>27%</td>
<td>28%</td>
<td>32.2%</td>
<td>15%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The higher percentage here, according to McDougall's measure, denotes those who were affected most by the so-called illusion. He thus went on to draw comparisons on the above data, "[t]he illusion affected the judgment [sic] of weight of the Murray men almost twice the amount that it affected that of the English men, and the Murray women shewed [sic] themselves still more markedly subject to it" (p. 199).

However, there is an interesting twist to these results although the Englishmen still come out tops. McDougall had to confront a theory held by
Muller-Shumann that there was a normal response for the body to adjust itself physiologically when encountering the sight and feel of objects. What was under consideration here was a theoretical position that suggested that the human body had reflexes that went beyond any conscious deliberations. That is, there was a certain degree to which muscles of the body were responding to impulses automatically. However, to what degree this was to occur, was unstated. But, as McDougall maintained, we cannot altogether omit the influence of suggestion. And even if there were some degree of physiological impulse involved, the smaller scores in the above Table would still maintain its advantage over those who scored higher. As far as he was concerned then, it still followed that the Islander men, “although they exhibit a greater nicety in the discrimination of small differences of weight, are yet subject to the size-weight illusion to a very much greater degree than the English men” (p. 200).

G. Variations of Blood Pressure
McDougall (1903) was also drawn to test the Islanders’ blood pressure. A prominent viewpoint held by people in the West, “asserted that the inferiority of the black races is due to the cessation of the growth of the brain at an earlier age than in the white races, and it may be that this is in part, or wholly, due to a less active response of the blood pressure to mental activity” (p. 201). His final contribution to the documentation of racial characteristics thus as a member of the scientific team was premised on the following idea:

... since the effective working of the brain is so intimately dependent on a rapid circulation of the blood through it, and since that circulation is so largely determined by the state of the arterial pressure throughout the body, the power of mental activity to raise the general blood-pressure must be of great importance in promoting the vigour and effectiveness of mental processes. And it may be that this power is an element of fundamental importance in determining the superiority of the higher races” (p. 201).
But, McDougall prioritised for himself a simpler study “to discover, if possible, some correlation between the activity of mental processes and the response of the blood pressure” (p. 201). He used a Hill-Barnard sphygmometer to measure the Islanders’ blood pressure when at rest, during muscular work, and in the course of mental work. This was all done in one sitting. To gain a measure of the Islander when at rest, McDougall “engaged the subject in conversation for some minutes in order to allow any exciting effect of the application of the band to his arm to subside” (p. 201) before taking five to ten readings. The same Islander was then required to squeeze a dynamometer at 50% of his maximum capacity and a reading taken 15-20 seconds after he began squeezing. Five to ten readings were taken in these ways. In the next, the Islander was given a maze drawn on a card and was required to trace his/her path to the centre. A series of readings were taken during and after this activity. In a few cases, readings were made when an algometer was applied to “the hypothenar eminence [?]” (p. 202) with such force so as to cause slight pain in the Islander. However, Table XXXIII on page 203 and 204 recorded the details of readings taken only at rest and during muscular and mental work. Quite notably, we have the details of every measure taken of the Islanders whilst no such effort was made to provide the English data. We are just told what their overall averages were. Furthermore, no heed is paid to the disparity in the number of participants in each test. The following Tabular statement of the details provided thus shows the comparisons McDougall had to consider. I have included the average mercury levels when at rest – something McDougall chose not to sum up or refer to - and the single representation he gave of the levels when under pain.

Table 11: Average blood pressure results.

<table>
<thead>
<tr>
<th></th>
<th>At Rest</th>
<th>Muscular Work</th>
<th>Mental Work</th>
<th>Under Pain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

180
Men of Mer

<table>
<thead>
<tr>
<th>Men of Mer</th>
<th>28 men - 96.1mm</th>
<th>26 men - 16.5mm</th>
<th>24 men - 6.6mm</th>
<th>14 men - 11mm</th>
</tr>
</thead>
</table>

Boys of Mer

<table>
<thead>
<tr>
<th>Boys of Mer</th>
<th>11 boys - 132mm</th>
<th>11 boys - 23mm</th>
<th>11 boys - 11mm</th>
</tr>
</thead>
</table>

Englishmen

<table>
<thead>
<tr>
<th>Englishmen</th>
<th>16 men - 25mm</th>
<th>16 men - 13mm</th>
</tr>
</thead>
</table>

This has been a consistent feature in McDougall’s documentations of not providing the equivalent statistical data afforded to Islanders. Nevertheless, in these ways, he could concede that differences between the men of the Islands and England cannot be contemplated due to “the numbers of individuals too few and the difficulty of the observations too great” (p. 202). Table XXXIII provides all his data on “touch and weight discrimination, sensitivity to pain, size-weight illusion and blood pressure” (p. 202) of Islander participants, and notably with no corresponding information on the English, as an offer to others for their own deliberation. No such consideration was made by himself and the Table thus closes the Chapter on the Touch senses of Islanders.

Reaction-Times

Myers (1903) also tested reaction times of 53 Islanders and compared them with 26 Englishmen and 26 people of Sarawak as well as “five members of the expedition and of two Englishmen in Sarawak” (p. 205). There were three tests in all. The first tested the reaction times of Islander’s response to an auditory stimulus, the second to a visual stimulus and the third to a choice-visual stimulus (this was one that required the Islander to respond to a visual stimulus but had to register his response by pressing morse keys and raising his hand to designate one colour being seen and the other hand for another colour).
Myers found that the older men of Mer was notably slower in their reaction times than the boys and is mostly indicated in the results of the auditory stimulus. These results too show that the boys scored just as well as the younger adults in the auditory tests. However, when the young adults of Mer are compared with adults of the same age group (16-35yrs) from Sarawak and England (the English contingent were university students as well as graduates, and laboratory assistants) new things can be observed. First, the Sarawak people outscored the others in both the auditory and the visual tests. Second, the English people did just as well as the Mer people in the auditory tests but were notably faster in the visual tests. The most outstanding feature was the difference between the Sarawak people and the others viz., their reaction times were half of the other groups in both tests.

Moreover, as Myers (1903) found, what can be interpreted from the figures “is dependent on an arbitrary selection of one of many possible ways of arriving at the mean reaction times” (p. 215). Indeed he argued that, if the average of the median was changed to “either the median of the median columns... or the median of the ‘average of ten’ columns” (p. 215) or, if we were “to consider separately the individuals whose series contained no a- or b-reactions so that those who gave irregular reaction -times should no longer weigh upon the general mean” (p. 215), one could effectively form alternative figures, and thus new correspondences between them (see Table XXXVIII). In these ways, similar results can be achieved as before but with one notable exception, “[t]he visual reaction-time of the Sarawak natives... is almost identical with that of the English” (p. 216). In these ways as well, the results of the choice-visual tests can be further manipulated. For example, the results of the English people in this new formulation can now show that they were much faster than the Islanders were in their reaction times.

Quite appropriately Myers (1903) reminds us that these tests only teaches us “that in a given time one people has adapted itself more readily than another so as to perform a prescribed reaction more rapidly” (p. 221). And, that
"the proportion of slow or irregular... [participants] (most of whom will react satisfactorily after adequate practice) must vary from community to community... [and] in this sense, reaction-times may be said to vary inter-racially" (p. 221). In his final summation, he suggests that,

[s]uch racial differences in reaction-times, if actually established by further research, may turn out to be merely the expression of racial differences in temperament. For it is easily conceivable that a highly strung, nervous people cannot develop the disposition, or assume the attitude, that is favourable to the most rapid and regular reactions with such readiness as can a relatively unemotional people. (Myers, 1903, p. 223)

The crucial word in this summation is the word 'if'. 'If' further evidence can be established then it may be able to suggest what he proposes. But, there is no evidence is his study that can remotely support his kind of suggestion. What exists is data that suggests that the English participants did not do well as expected. And what followed was a means to manipulating the figures to show how the English scores can actually be raised to the level of the Sarawak contingent and, in turn, to show that they were better than the Islanders were.

Summary

It is imperative that we first come to terms with the standpoint that what was stated about Islander faculties in the above tests was neither an aberration of science nor the evil thoughts of self-interested researchers. It does not matter necessarily that Islanders were circumscribed as a secondary other to standards familiar to those in the West. And it does not matter necessarily either that at times 'truths' were stretched beyond the data gathered by the researchers. But, that it matters more:

- that Islanders understand how the 'truths' have been founded on very fragile grounds;
- that such 'truths' were achieved only on a basis that disconnected Islander historical trajectories from such documentations; and,
that the same 'truths' were achieved by disengaging any view to the political irruption in the lives of Islanders as having anything to do with the impact of those from the West.

The elected standpoint here is that science, and indeed the whole project, emerged at a particular moment in history that not only defined its parameters but also confined its usefulness to certain priorities and not others. At the onset of my investigation, the charting of scientific tests at the turn of the Century was about showing historical moments that enabled things to be said and indeed what enabled things to remain unsaid.

I wanted to show in this Chapter a history of the highly confined position taken to the interpretation of data and in so doing, show positions in history that are always present, readily assumed, and rarely considered as constricting what can be said. And perhaps less directly, I had hoped this would bring to light the epistemological schema we have become so loyal to, and thus the very selective path of our preoccupations and deployment of extant positions that have served to uphold the vantage point of those in the West.

Perhaps, then, Islanders can better appreciate what constrains what can be conceived about the intersections of Islander positions and experiences and Western knowledge systems, begin our departures from the constraints of 'them and us' paradigms, and plan a more aggressive path to learning about what conditions all of our possibilities.

3. Anthropology: Charting how the mind of a savage projects a community.

The cultural anthropology of the Islanders as documented by Haddon and his colleagues is presented as the final example of the ways scholars from Cambridge went about intervening in Islander communities and characterising Islanders into a Western order of things. The Cambridge Expedition was to provide a comprehensive picture of the people of the Torres Strait. Thus they documented such things as the Islanders' birth, childhood practices, puberty rites, toilet habits, their spiritual beliefs, social
organisational schemas, and burial rituals. The data contained in the Cambridge team's Reports (1904, 1908, & 1912) is extensive and very detailed. It was brought together in a final Report as a general ethnography of Torres Strait by Haddon and published in 1935.

These Reports continue to be regarded as valuable sources of data on Islander traditions and thus Islanders. Haddon was formerly a Zoologist. According to Arturo Alvarez Roldan (1993) - in a paper delivered in Portugal at the European Association of Social Anthropologists Conference in 1990 - the transition by Haddon from "zoology to ethnology was nothing but the transference of a great part of the techniques, instruments, theories, models and point of view of biology to the study of anthropology" (p. 23). According to Roldan's viewpoint, of concern is the transference of zoological models into anthropology. In particular the three criteria used to identify animals and divide them into zoological regions. They are: (1) what is found; (2) what is rarely found; and (3) what is absent. The framework thus begs another reading of the documentation purporting to be the folklore society in the Islands.

A. A Society with no written historical knowledge is a society based on myths, folk-tales, totems, and kinship systems

There was relatively little written about the people of the Torres Strait Islands in 1898 when the Cambridge team visited. The common view of the people at that time was that the Islanders were without a literate tradition. There was a view of Islanders of the Torres Strait as having no written records, no supreme God, no Government and thus no historical knowledge, no religion, and no formal organisation. As far as the team was concerned though, there had to be a core or something that people adhered to guide their communal lifestyles comparable with historical knowledges in societies in the West. Although many aspects to this core were considered by the team, particular efforts were made by Haddon to document the "folk-tales" (e.g., 1904, pp. 9-120; 1908, p. 1-63; & 1935, pp. 101-6, 292-3) of the Torres Strait communities.
as well as the kinship (e.g., 1904, pp. 121-152 & 1908, pp. 64-101) and totemic systems (e.g., 1904, pp. 153-193) to provide some basis for understanding the regulatory life of the communities observed during their visit in 1898. By considering how these aspects of life related discursively to the lived experiences of members of the community, they were hoping to determine a cultural context for their communal life.

**Folk-Tales**

It was the Cambridge team's view as well as that of others like Landtman (cited by Haddon, 1935, p. 101) that with...

...ordinary care [folk] tales may be accepted as trustworthy ethnographical documents so far as objects, certain customs, and beliefs are concerned" (p. 101). The miraculous elements may be discounted, nor can tales be regarded as historical evidence. Events and technical innovations are associated with one or more culture heroes and it is convenient to retain these ascriptions, not that they may be accepted as literally true, but because they clearly indicate that there is a traditional belief in the spread of cultures from one area to another. (Haddon, 1935, p. 101)

The project for the team members thus was to consider the folk-tales of the people in the Strait not as true historical evidence but to seek in them indicators of cultural shifts and spread throughout the Torres Strait region. Constructing a cultural matrix was thus central for locating the people in a historical context. It was crucial that the folk-tales were documented carefully. But the meanings that might be derived from the tales, the team recognised had to be treated with even more care.

In collecting these folk-tales I could not take down the actual native words, having limited time and insufficient knowledge of the language, but I have given a faithful rendering of the tales as told to me in broken English [sic]. I have nowhere embellished the accounts, and I have given most of the conversations and remarks of
people in the very words my informants used; thus preserving, as far as possible, the freshness and quaintness of the original narrative. I believe that in many cases the native idiom was bodily translated into the 'Pigeon English'. (1904, p. 9)

Haddon (1908) documented sixty-nine folk tales. Furthermore, through the engagement of middle-aged men as his informants, as well as requiring them to recollect stories as they were told by the "old men" (1904, p. 9), allowed him to "confidently claim that this collection of tales really represents the traditional folk-lore of the last generation and the stories therefore may be of any age previous to the influence of Europeans and South Sea men." (p. 9). He then collated these folk tales into categories of nature myths, culture myths, totem myths, religious myths, tales about Dogais (devil spirits), tales about people, and comic tales. He provided a synopsis of their plots and their anthropological relevance in a subsequent section - and in English. He hoped that his interpretation and compilation of folk-tales was "sufficiently representative of native thought and expression" (p. 1). This was important because they constituted the basis upon which he rested his case of a 'folklore society' in the Islands.

According to tradition there have been numerous cultural movements to Torres Strait [sic] from Daudai [the great mainland to the north - PNG] and between the islands. Very few influences have come from the Cape York Peninsula and these for the most part are reflex movements, as originally the cultures came to Australia from Papua through the Strait. I have reiterated on p. 101 my acceptance of the evidence of folk-tales as worthy of consideration, though every statement cannot be accepted as literally true. The marvellous is always apt to intrude, but this and deliberate exaggeration can usually be detected. In all mythologies cultural improvements and cultural spreads are usually associated with named persons. It is immaterial whether they ever existed as such, but it is convenient to employ these names as a concise method of recording the tradition. Therefore I have not hesitated to make use of the tales as indications
Several observations about his method can be made. First, his 'according to tradition', seems to allude to something intrinsic to Islanders but is in fact linked solely to his documentation of myths and folk-tales. That is, the first point that needs highlighting is his acceptance of the tales - as translated by him - as 'the tradition' of Islanders. The next point is about an assumption that the tales come out of a pristine state unblemished by any external influences (e.g., the answer to the zoological question of what belongs to or is found in this region). Before making the comments in the above quote, Haddon cleared the way by claiming that prior to the intervention of missionaries, pearsers, and the Australian Government, the Islander cultures were “unaffected” (p. 411) by the early voyagers from Spain, Indonesia, or any other place. A further point, that needs to be highlighted is his acceptance that the tales to which he referred to were to be considered unequivocally as belonging to this region. Haddon was quite confident about this: “[It is safe to assert that thirty-five years ago there was no intelligent intercourse with white men; this period may practically be reduced to twenty-five years, and in some islands to even less” (1904, p. 9). The final point to highlight is his entertainment of the notion that beyond the marvellous and the exaggerated, one is able to detect in these tales traditional aspects that will tell of the cultural evolution of the people. He was able to make such an assessment of the cultural spread in the region, even though a relative chronology of the evolution of culture in the region was not possible. The following are some examples of how Haddon believed folk tales informed the cultural spread: (note that all persons referred to in the following are fictitious characters from tales gathered by Haddon).

Reference is given on p. 374 to various culture heroes: Yarwar, the great gardener of Badu, and Gelam came from the Western Islands and increased the vegetable of food from Mer. Sida or Soida (pp. 374-380), who came
from New Guinea, was the bestower of many good things. He instructed people in language, stocked reef with the valuable cone shell and with other shells; he was the first to bring coconuts and bananas and other plants useful to man [sic], but the greater fertility of the Eastern islands as compared with the Western is attributed to the treatments accorded to him in the different islands.

Sesere of Badu was the pioneer of harpooning dugong and Bia of Badu taught people how to catch turtle by means of the sucker-fish; he was known as Barat when he came to Mer. All the culture movements were from west to east except in the case of Abob and Kos of Mer, who built the first stone fish-traps which they introduced into the other Eastern islands and into some Central islands; on their way westwards they either taught a new language or suggested a different way of speaking the old one; finally they are said to have settled in Kiwai (vi, pp. 26-8).

The journey of Auken and Terer from Mer to Boigu in the west is only an apparent exception, as this was merely the route taken by the spirits of the dead (vi, pp. 128, 131-3). Although they are said locally to be of Miriam origin (vi, pp. 31-3), they certainly were Western personages who were introduced by Waiet into Mer with other funerary ceremonies. In the Western version of the myth (v, pp. 56-62) they are aukum and Tiai who lived at Boigu in Moa, but finally they went to the island of Boigu.

The folk-tales state that the original inhabitants of Daudai were in an extremely low state of culture from which they were raised by cultural influences coming from the north.

The earliest Western islanders [sic] were doubtless in a state of culture similar to that of the aborigines of Daudai, but the same cultural influences from the north spread into the islands – when or what length of time this took we have no means of knowing.

The migration to the Eastern islands may have been about the same period.

The earliest people were simple hunters and collectors, but the introduced art of the cultivation of the soil improved their mode of life. The natives of Muralug and the neighbouring islands never really attained this second stage, and even in Mer three folk-tales (vi, pp. 6, 9, 11)
refer to the cooking of aroids for food, which now are eaten only in times of scarcity; this may be a remembrance of a time anterior to the cultivation of yams. The story of Yarwar shows that some of the inhabitants of Badu were then extremely incompetent gardeners.

The introduction of new kinds of cultivated plants or better varieties of yams and the like is accredited in the Eastern islands, or at all events in Mer, to named persons who came either from the Western islands or from New Guinea.

We may guess, but we do not know, what other elements of culture were used or practised at this period.

(Haddon, 1935, pp. 412-413)

Although nothing in the above comments was intended to be a comprehensive picture there is, however, a lot that can be said about the cultivation of 'truths' from folk-tales. But the more important thing to analyse is Haddon's effort to compensate for the absence of the historical literature akin to that, which underpins societies in the West. That is, he collected many folk-tales from the people in the Torres Strait in order to establish some idea of their cultural make-up. Islanders were required thus to recall tales in ways their ancestors told them in the traditional language, and convey them in a 'pigeon language' so that Haddon could understand them. Haddon then went on to document the tales in English, as he understood them. This became a primary source for him to draw upon for what he considered as "anthropological incidents" (1904, p. 10). As can be seen in the above quotes from the texts, Haddon sought from various tales and myths, that which could be considered "as evidence for the occurrence of certain customs and beliefs" (1904, p. 10). By substituting folk-tales for a historical context for people in the Torres Strait, Haddon effectively invented a way to view Islanders as a people whose thoughts and expression were enmeshed in a cultural tradition constituted by myths and tales.
Kinship System

The genealogies of the people of the Torres Strait were also of great interest to Rivers (see 1904, pp. 121-128; 1908, pp. 64-92). He described the work done on family trees as his "attempt to collect the pedigree of a people of low culture" (p. 64) in order to "furnish a large part of the material which has been used in working out the account of the social organisation" (p. 122) in the islands.

Data from the Western Islands will serve here as an example of the Cambridge team's efforts to link kinship systems to social organisation in the islands. The Islanders' kinship network was identified in both the western regions as "a definite example of what is known as the 'classificatory' system" (1904, p. 139) says Rivers. He noted at least eighteen names used for different members in the family and that some of the terms used were of two forms. One was used for speaking directly to a person - the 'vocative form' - and the other when speaking about a person what he termed as the 'ordinary form'. To Rivers, the Islander's system of referring to kin differed from the American and Asian systems in two distinct ways. In the Western Islands, for example, Rivers explained, a distinction was made in the names used to identify children of brothers and sisters. In today's terms, these children would be referred to as first cousins. But in the old days, according to Rivers, Islanders made distinctions between first cousins to identify the relationship between their parents. For instance, if the parents were brothers, the children - irrespective of their gender - were to relate as Tukoiab, and if the parents were sisters the children would also relate as Tukoiab - "a reciprocal term used by men to one another or by women to one another" (p. 131). However, if the parents were in a brother-sister relationship the children - again irrespective of their gender - would relate to each other as Babat - "a reciprocal term used between men and women" (p. 131). In short, Tukoiab was used between children of brothers as well as between children of sisters whereas Babat was used between children whose parents were in a brother-sister relationship. This system as noted by Rivers differed in two
characteristic ways from the so-called American and Asian forms. There were
distinctions made between relatives to identify the relationship of parents; and
there was a reciprocal character in the terms used by them.

Rivers then went on to outline, albeit hypothetically, the complexity of such a
kinship system in the western islands and what a child needed to know to
operate in such a system. He began by explaining that the child “learns to
give to each individual person his special term of kinship just as he learns to
give a special name to other objects around him. There seemed to be little
doubt [to Rivers] that the child used terms of kinship as commonly as, or
more commonly than personal names” (p. 140). A son, for example, learned
from this mode of operating that,

everyone whom his father called tukoiab is his tati; that
everyone whom his mother calls tukoiab is his apu; that
everyone whom his father calls babat is his ngabat and that
he may also call them kutapu; that everyone whom his
mother call babat is his wsadum” (p. 141). He will further
find out that everyone whom his father calls tukoiab will be
called by his mother ngaubat, and that everyone whom
his mother calls babat will be his mother’s ini. Further,
he will find that everyone whom his mother calls tukoiab
will be called by his father ngaubat, and that everyone
whom his mother calls babat will be his father’s ini.
(Rivers, 1904, p. 141)

The complexity, Rivers explained, was compounded when the child heard
others being related to. For instance, Rivers pointed out, those older folk
who the “father or mother call tati or wsadum will be his aei or babat, and that
all whom they call apu or ngaubat will be his kaiad or aka” (p. 141). And, Rivers
continued, it was even more confusing when

A boy will find that all whom his father or mother call
kazi are his tukoiab or babat, according as they are male or
female, while a girl finds that her parent’s kazi are her
tukoiab or babat, according as they are female or male.
They will also find that they give the same name to those
whom their *uawkam* calls *kazi*, and their father calls *uawkam*, and to those whom their *numat* calls *kazi* and their father calls *uawkam*" (p. 141).

As the child grows up and marries s/he learns new terms for wife, husband, in-laws, children, and so on and so forth, and adds to the dimension of a very complex system underpinning the social organisation of a people.

But before going on to examine how Haddon arrived at his conclusions, a few words on the above sketch of the kin network needs to be made. The use of traditional names as described above heighten the complexities amongst the kinship system identified by Rivers. There was nothing really complicated about this. Today, for instance, there are sons, daughters, fathers, mothers, aunts, uncles, grandfathers, grandmothers, great-uncles, great-aunts, first cousins, second cousins, third cousins, wives, husbands, in-laws, nephews, nieces, grandson, grand-daughters, and so on. As a child grows in today’s environment s/he hears and learns very quickly who is who by centring her/himself and adopting terms that refer to her/him. They also hear people referring to others differently to what s/he is used to but this is not confusing because what matters is that s/he uses the terms that relates to her or him. For example, a child who heard his or her mother referring to dad and mum will learn that they are to be known as grandmother and grandfather. S/he also learns that who the father call mum and dad are also grandmother and grandfather. And when the grandparents refer to child’s parents as son and daughter the child learns that they are his mum and dad. And so on and so forth with aunts, uncles, nieces, great aunts and uncles etc. There are also vocative and ordinary forms used today: e.g. ‘Here is my grandmother’; and, ‘Hello granny’; ‘That person is my mother’; and, ‘Meet my mum’. This is not to dispute anything in what Rivers has noted but to lessen the complexities brought to our notice. And by doing this, to focus on the only two significant differences between the old and the new system. The first was about the distinctions made between children of brothers, children
of sisters, and children of brothers and sisters as mentioned above, and the second, was to do with the marked reciprocal character of the terms used between them.

However, the point to the kinship system lay beyond the naming of kin and more towards its connection to the social spheres. The first point that Rivers identified was the role that such naming systems played in marriages. As he stated, "in the case of any disputed point, such as that of two people who wish to marry... it may be his knowledge of the exact relation in which they stand to one another, and probably of the precedents for and against such a marriage, which decides the point" (p. 142). Rivers also identified "kinship taboos" (pp. 142-144) that regulated how married people were to refer each other. For instance, he found that once married people had to refrain from using the personal names of his/her in-laws. They had to be called by their kin names: as brother of, sister of wife of, husband of, etc. whichever was convenient to use in any communicative event. This "disability" (p. 143) as Rivers chose to call it, had relevance to customs documented in other parts of the world where people corresponded with their in-laws via a third person. Rivers contended that under these arrangements social intercourse between people and their in-laws, although not regulated by any strict rule, was mutually avoided.

To Rivers, the kinship system thus "was a means of regulating social etiquette, but [as he contended] it was much more than this" (p. 144). He identified within this system "very definite duties and privileges attached to certain bonds of kinship" (p. 144). When someone died, for instance, there were particular members in the kin system who would be distant enough from the deceased, but related through marriage, who were to carry out the burial rites. In another, when there was conflict between married partners there were others, according to their level in the kinship system, who had a legitimate role of stepping in as moderators. Another practice documented by Rivers showed that a person who stood in a particular relationship with others could
take anything belonging to them. For instance, Rivers observed that a
“nephew, even if quite a small boy, could take, lose, spoil or destroy anything
belonging to his uncle and the uncle would utter no word of reproach or
anger” (p. 146). In one interview, Rivers was told of a case where a nephew
actually took a canoe belonging to his father and gave it to his uncle, and the
father said nothing. Rivers noted however that this may be the process by
which the uncle can be compensated for things taken by the nephew in other
ways through his standing with the parents. Rivers provided many other
descriptions of the boy’s relationship with his maternal uncle and learned that
“the special guardianship of a man at the most important period of his life
was entrusted, not to his father but to the brother of his mother... [and] this
bind between nephew and uncle becomes especially close after initiation” (p.
147). In all instances, this was to do with the uncle overseeing his
responsibilities to his sister.

According to Rivers (1904), there were clear duties and privileges for the male
members in the Islander community in other ways: “[t]he essential feature of
the various customs connected with the relationship of brother-in-law... is
that an individual could demand certain services of anyone who stood to him
in this relation” (p. 149). He would, as Rivers was told, organise and take
charge of a hunt, procure what he needed for the hunt including other
people’s boats, take charge of the sharing of the catch, and throughout
maintain a subdued but senior role in providing and keeping calm in the
family. Whilst the owner had the charge of the steering the boat, as Rivers
pointed out, his brother-in-law had a place in the front of the canoe
designated especially for him and would take charge of the activities on
fishing trips. Although he did all the labouring tasks during the trip, he also
took charge of the hunt directing the owner on how to prepare for the hunt,
which tides or areas to work, when to go, when to anchor, and so on (Rivers,
1904). His view to all this was that it was a deeply seated practice: “[t]he
whole group of customs is strongly suggestive of a survival of a condition of
society in which a man was closely associated with and had to render service to the family of his wife” (p. 149).

Another feature of the kinship system noted by Rivers was its influence on how people should address each other. For instance, Rivers noted, there are kin relationship that orient how people can be approached, how they should be addressed, and who can not be approached directly; and indeed if the social etiquette was violated they would shame themselves. One example provided to Rivers indicated that a person may not use the personal names of his in-laws, and may only communicate to his or her in-laws indirectly through their partner. If direct contact was necessary between the father-in-law and the son-in-law, for example, the son-in-law would be “very subdued and that he would suffer more or less from shame” (p. 143). Rivers hastened to add that these were not “strict regulations against every kind of intercourse between a man and the relatives of his wife, but there seemed to be a certain amount of mutual avoidance of each other” (p. 143). He recalled an incident during an interview when this social etiquette was not being adhered to and explained that the erosion of such traditions were the result of the presence of foreigners in the region. In short, what he was trying to say was that there once used to be order and better organisation of the community through kinship systems in ways that did regulate all social interactions but that in changing times they have become less effective as social determinants.

Rivers (1904) further explained that times had changed from earlier periods in other ways as well. The maternal uncle had right of way in Mabuiag in the old days but at the time of his visit, “there seemed to be little doubt that the duties of ini were reciprocal and that a man could demand service of his sister’s husband, while the latter could in return demand service of the former” (p. 150). He reiterated that at one time there was clear right of way given to the maternal uncle but “by a process of generalisation, these duties have now come to be regarded as pertaining to the relationship of ini in general” (p. 150). This, he claimed, has caused confusion in the expectant
roles of the male members of the community, and particularly about who was supposed to do what. Combined with his hypothetical sketch of the 'confused child', his explanation is that this was because there was "a tendency to confuse together things possessing the same name" (p. 150). Moreover, this was a tendency he likened with the confusion of colour names in the islands: "I think there can be little doubt that the influence of nomenclature in the case of kinship has been a cause which has led to the confusion of duties originally distinct" (p. 150). But as pointed out above, there is little that can be regarded as complex or confusing about the nomenclature of kin especially when seen in Western terms. Nevertheless, Rivers, ever the cognitive psychologist, went on to claim that "the close relations between a man and his mother's brother which exist in Mabuiag may similarly be regarded as a survival of a state of society which has now disappeared" (p. 150). And this subsequently enabled him to go on to confirm that, in the old days, the kinship system was most important because they determined the social relations between Islanders.

Totems
Both Haddon and Rivers (1904) saw the use of totems in the Islands also as having some influence on the social organisation of the people. They adopted the popular notion used in relation to indigenous peoples in other parts of the world, that a totem was "a class of objects that is reverenced by a body of men and women who acknowledge a definite relationship to that class of objects" (p. 153). They went on then to state their case that a group of people who have their lives bound by a class of objects is what is known as a 'clan group' or a 'kinship group' and usually there were social obligations that bound them together. And in such groupings, they both saw two important social aspects in their relationship with the totems viz., the social, and the religious or spiritual.

But first, what Haddon and Rivers understood to constitute a totem needs to be explained (1904). They claimed that a totem was spoken of in the Islands
as augul. Auguls were represented "usually [by] a single species, of animals" (p. 153) but that on Saibai Island they observed representations of "the Daihau, a tuber like a sweet potato, the Kokum or hibiscus, and Goit, a stone that was used for making stone-headed clubs" (p. 152). Others were in the form of "legendary heroes" (p. 154). On another island, some were shaped in the form of a star - Tinui. They observed others used to represent the first and last quarter moon phases - kutiku and giriku. The latter two apparently represented a group of clans that was treated with utmost respect by the Islanders on Mabuiag Island.

Clan groups, Haddon and Rivers (1904) noted, frequently adorned themselves and their possessions with representations of their augul. They noted a few cases where totems of "the Dangal, Kodal, and Tabu augul were cut on the loins of four women" (p. 158) but hastened to add that, as far as they knew, this was not practised widely in the islands. Robert Bruce (cited by Haddon & Rivers, 1904, p. 158) did add to this view though showing cases observed on Boigu Island where the body was marked in one way or another to indicate their totems. However, Haddon and Rivers conceded that after concentrated efforts to locate more extensive evidence of such body markings none could be located other than the four women previously noted. They also claimed that people of primitive cultures liked to carve their totems on their material possessions. And though they appear variously on the many artefacts taken from the Torres Strait it was hard to make a case in favour of this due mainly to "the lack of authentic specimens" (p. 159).

The social aspects of the totemic system derived from the study are interesting. Haddon and Rivers (1904) observed a number of clans and totems on each island they visited, and noted that although a clan group may have more than one totem to signify their heritage lines, there was usually a chief totem that combined them as one. They also noted totemic lines from their genealogical records to show that the sons always maintained the totem of the fathers. And in these ways, they were able to state that "decent in the
clan has been reckoned in the male line” (p. 160). To be more specific, each partner in marriage, as can be gathered from the genealogical records, kept their original totems but the children of these marriages were always accorded their father's totem. The genealogies listed in Volume V (1904) and VI (1908) attest to this. And as far as they knew, “[a] man was not able to change his totem” (p. 160) and severe reprimands were served if totem lines were violated or clan boundaries were overstepped or threatened in any way. Where, at times, they did vary from this custom they were mostly put down as an exceptional case or to confusion. In short, to them, this was a system from the old days that not only was organised but also highly regulated.

To Haddon and Rivers, the most important aspect to the totemic system was its management of marriages, although they accept that at the time of their visit marriages were organised along kinship lines. As they recalled, marriages regulated by the totemic system were not allowed between clan members. Sexual intercourse, they added, was likewise prohibited. In the few cases evident in the genealogical records where this had broken down, they were found to be the same clan groups but from different islands. In other cases they were found to be traditionally of the same totem but belonged to different clans – and, presumably, of a different generation. In one case, where a man married his sister, the man was simply listed as unbalanced.

According to Haddon and Rivers (1904), the membership of a clan “was a marked feature in the social life of the people and it took precedence of all other considerations” (p. 161). If members of the same clan name, for instance, would visit another island they would be treated well and regarded as their own. They cited other incidents to indicate that even in warfare harming another clan member would be sacrilege. And when seen together with the regulatory nature of totems in marriages, Haddon and Rivers were left in no doubt that in the old days the aforementioned “aspects of totemism prove that it was a distinct ameliorating influence in social intercourse and tended to minimise intertribal antagonism” (p. 162).
It is interesting to note just what constituted for Haddon and Rivers the magical and religious aspects in totemism. They stated at the outset of their study that this was not an explication of those religious aspects known to those in the West. Instead, Islanders "regard[ed] as religious those totemic regulations and practices that have reference more directly to the non-practical side of human life" (p. 182). The magical aspect in contrast to this was regarded as, "a pantomimic or symbolic action on the part of the human members of a clan which is designed to have a direct effect upon the non-human members of the clan" (p. 182). In short, and contrary to what was known as religion in the West, Haddon and Rivers restricted themselves to describing Islanders engaged in aspects of symbolic rituals and pantomimes that used animals, or parts of animals to invoke, for instance, good or bad seasons. What follows from this is an exposé of the magical ceremonies used by Islanders that were connected with dugongs and turtles to display rituals and, more importantly, events that noted further regulatory elements in the social world of the Islanders.

It was observed that when a man from the dangal (dugong) clan caught the first dugong of the season a ceremony was performed to celebrate its catch and to notify the arrival of the season. The people who officiated in this ceremony adorned themselves with various items, and painted their bodies to simulate aspects of the animal. The dugong was then placed on special plants (pui), and the performers went about their ceremony. The dugong was then given up to the serial (turtle) clan to distribute amongst the community. Haddon and Rivers (1904) observed that if a member of the dangal clan was not happy with his share he would perform magical rites to give bad luck to the selfish one. "He would take the penis of the dugong, through which he would pass an arrow and pushing it up and down would say the following unum [spiritual power]: I make dugong penis copulate do not again come hither do not near" (p. 183).
It was observed that similar practices were carried out when the first turtle of the season was caught. Feathers and headdresses were worn and the Islanders danced around the turtle whirling bull-roarers and shaking their kulaps (dance rattle). They performed rituals to bring on a good season for turtles. The turtle was then given up to the dangal clan to consume. Again, Haddon and Rivers (1904) resorted to an account by their colleague about the regulatory control of the totemic system - placing jinxes on people - to explain their observations.

An ill-conditioned fellow might make the surlal season a very bad one by taking the heart of any turtle, wrapping it up in the bark of the Ti tree and, after placing it in a segment of bamboo with more bark, burying the whole secretly in hard ground. To annul the effects of this charm, the heart was dug up and boiled for some time in sea-water along with the plants.... The boiling was done in a canoe, which was then launched and manned by a crew of Surlal men. The boiling decoction was slowly poured into the sea while what remained of the heart was hoisted on the mast of the canoe, some words were chanted and the canoe returned to the shore. The surlal men might not go turtle-fishing until a turtle had been caught by members of some other clan. (Haddon & Rivers, 1904, p. 184)

From these documentations and others, Haddon and Rivers (1904) considered that the mystic affinity between clans and totems was "deeply ingrained and... [was] evidently of fundamental importance" (p. 184). Moreover, they went on to add, there was an expectation of clan members to adopt the characters of their totems. For instance, the cassowary, explained Haddon and Rivers, was a violent creature "of very uncertain temper and can kick with extreme violence" (p. 184). The cassowary clan, and similarly with the crocodile clan, the shark clan, and the hammer-head shark clan, was thus described by Haddon and Rivers as fighting clans. By contrast, they documented clans with totems representing the skate, the ray, and the sucker-fish as being peaceable clans. Such alliances with their totems, they
contended, provided a ready-disposition, if not the means, for members to measure their characters.

As far as the Cambridge team was concerned, in former periods before the arrival of foreigners in the Strait, this was a society of people with a cultural history secluded from others and who, according to their folk tales, emerged primarily in the Strait. Such a unique development of a culture of a people was, as they learned from the genealogical records, organised socially along kinship and totemic lines. By identifying levels to the different generation of people, Haddon and Rivers both found a ready organisational structure which they were able to use to characterise 'community' in the Strait. According to this model then, in former periods the social organisation of the community of people in the Strait, was to a large extent dependent on a kinship and totemic system that not only bound people together as a social unit but also provided regulatory aspects to their behaviour, how they should relate to one another, as well as who they could marry. In the absence of deep historical knowledge of the people of the Strait a number of loose social elements have been brought together to constitute the social and cultural paradigms of the Islanders. Haddon and Rivers' documentation of the lives of Islanders, however, cannot be read simply as an attempt to identify the traditional culture of a people. Theirs was a project to identify the essential characteristics that constituted a people in their primitiveness.

**B. A Society without a Supreme God is a Society without a Religion.**

A substantial part of the Cambridge Expedition goal was to also document the spiritual constitution of the people in the Torres Strait. Haddon, Seligmann, Wilkin and Myers all spent large amounts of time documenting "some of the religious conceptions and rules of conduct and avoidance" (p. 241). In their view, however, there was nothing that they could discover that corresponded with "anything like an All-father or Supreme Being" (p. 316).
The first thing they did was to define their topic of study. They began by citing the conventional wisdom on differences between magic and religion: “Magic, or sorcery, is the constraint of nature by man [sic] through the action of the spoken or written word, or through some deed in connection with an object, or by a pantomimic ceremony, or in some analogous manner” (p. 320). Religion, on the other hand, was “a belief in the existence of a personal or impersonal being or beings with powers transcending those of mere mortals and to the actions that result from such a belief” (p. 320). Magic and religion in these ways emerged as separate categories so that clear distinctions could be seen between the world of the ‘savage’ and the world of the enlightened ‘civic man’. In their words, “if a man, who requires something specific, recites a formula or performs a mimetic action, he is doing a magical act, but if he requests some power to assist him to obtain that of which he has need, he is performing a religious action” (p. 320). The language used here is interesting: magic as opposed to religion; requires instead of requests; recites a formula or performs a mimic rather than requests some power to assist; on the former it is a constraint of nature whereas on the latter it is a belief. Hence, the emergence of clear divisions between ‘them’ and ‘us’ with religion upholding a position for those in the more ‘civil’ worlds and magic upholding positions of their more primitive counterparts. Moreover, it was also clear that the language used for the former was also to be less demanding than the language afforded to the latter.

However, as Haddon (1904) pointed out, it was not easy to separate what was religious and what was magical, as there were many places where they overlapped. He thus made mention that in what he did he had “not attempted to make a definite classification of the observances dealt with in this section” (p. 320) and instead “thought it desirable to bring together all I could find on the subject of magic” (p. 320). Indeed, this was so. The titles used for his observations include: “The Training of a Magician” (p. 321), “Magical Practices Against People” (p. 324), “Sympathetic Magic Connected with Human Beings” (p. 327), “Love Charms” (p. 327), “Magical Appliances”

Haddon and Seligmann (1904), for instance, documented the training of a magician. They said they were told that any ‘man’ could become magicians but few chose because of its unpleasant initiation process. Magicians in the Islands, in their view, were sorcerers or maideilaig in the local language who as they reported “understood all kinds of magical and medical lore... [and who] could cause disease and death and could cure illness. He could lure dugong, turtle and fish by charms or he could strike and kill animals with unerring aim, and he knew furthermore the virtues of animal and vegetable products” (p. 321). The high position of magicians was well noted and the things that they could do were considered well beyond any mortal being. On the basis of this understanding, Haddon and Seligmann launched into a ghoulish tale of how one became a maideilaig.

He was taken into the bush by the instructor and the first operation consisted in the old man defecating into an alup shell filled with water; when the mixture was well stirred the novice had to drink it all up, and in order that he might have the benefit of it, he was enjoined to keep his eyes open whilst drinking.... if the eyes watered during the process of training the novice would not make a good maideilaig. (Haddon & Seligmann, 1904, p. 321)
The reporting of black magic or cult practices of the magicians were marked by the most vivid descriptions and sat in stark contrast to the language used elsewhere in the Reports. Here is another example, “he had to eat the decomposing flesh of a dead man which was full of maggots, the effect of this revolting diet was to make the throat bad” (p. 321). It was not enough to report that the novice magician had to eat a decomposing body but it seems that Haddon and Seligmann were compelled to use a style of language for describing cult phenomena that left no doubt that one who ate decomposing human bodies also ate it when it was full of maggots. Another indicator of the presence of a fetish for this sort of graphic reporting was the following apology for not having found ‘voodoo dolls’, “[w]e have no information whether the maïdæig operated through objects belonging to the victim or intimately associated with him such as hair, nails or the like” (1904, p. 324).

Haddon & Seligmann (1904) reported that after three years of training the graduate would be deemed a magician. In order to kill, to place a curse, to injure, to lure, or to cure, set rituals and performances as well as incantations had to be followed closely. To carry out these rituals and performances they were aided with many items: “[a]mong the implements of sorcery were stone-headed clubs and spears” (p. 324), human effigies (see p. 324), a vine called kuman (see p. 325), and a crocodile’s tooth (see p. 326).

Haddon and Seligmann (1904) went on to show that the magician’s world also carried over into the general population. In this way, they attempted to superimpose a belief in magic as another means by which Islander people enacted their presence in primitive communities. Islanders used magical practices, they (1904) reported, for “a sympathetic relation between human beings and between people and animals” (p. 327). They cited, for example, that “at parturition a woman would get a good-looking man to come and sit behind her so that the child might take after him” (p. 327). As an example of magic between people and animals, they cited mothers who adorned themselves in fish bones to ensure their children become beautiful. As an
example of magic between people and plants, they cited the case of a particular tree at Mabuiag Island that was so significant to the men that if the leaves were burnt it would mean some of them would die in their next encounter with enemies. Like the magicians' discourse, various implements were used in carrying out such practices. Haddon and Seligmann cited cases on the Islands, where bull-roarers, throwing sticks, bark of a particular tree, and boar's tusks were used to increase prospects on animal hunts, to bring on stronger winds, or to assist Islanders in warfare encounters (see Haddon & Seligmann, 1904, pp. 328-9). Haddon and Seligmann claimed that, like the specialist practices of the maila, in the old days the magical acts involved "an expressed wish or command, or the utterance of a formula of some kind or another" (p. 329).

Love charms, or as Haddon and Seligmann (1904) chose to put it, "sweetheart medicine" were also reported on (p. 327). Magic, they claimed, could be deployed both to lure women as well as "drive away a girl's affection" (p. 327). They recalled several tales from Islanders to illustrate the type of logic behind these magical practices:

... just as a snake that is in one tree, can by swallowing its spittle make a bird that is in another tree come to it, so if a man chews certain medicine and a girl sees him swallowing the infusion in his saliva she understands what the man means and is constrained to go to him. (Haddon & Seligmann, 1904, p. 328)

However, Haddon was keen to distance himself from the following recount.

The following information was obtained by Mr Seligmann in Mabuiag: "The end of the os [sic] penis of a dog was bent or broken so that it became hook-shaped, the bone was then plastered with a chewed mixture of the following plants.... It was worn at the back of the neck during a dance by the man who wished to secure the affections of a particular girl. When the girl smelt the charm she would probably succumb.... All the while he is dancing the man
must repeat to himself or think hard of the name of the girl in question. (Haddon & Seligmann, 1904, p. 328)

Haddon’s definition of magical practices involves pantomimic acts meant to acquire something directly through chanting or reciting a formula. The so-called ‘magical act’, defined at the beginning of this section by Haddon as, ‘the constraint of nature by man’, is paralleled with the ‘rain dance’ to bring rain, or with some other pantomimic act to appease spirits to ward off bad luck, and so forth. There were many other acts like this included in the Cambridge Reports.

Haddon and Seligmann (1904) also described magic used in the horticultural and agricultural activities. They reported that a human effigy, modub, was used in the garden to protect the crop and to increase the yield. The modub and bull-roarers were placed in shrines whereupon nightfall the modub “became animated, and went round the garden swinging the bull-roarers to make the plants in the garden grow and they danced and repeatedly sang” (p. 246). The authors reported great celebrations took place to give thanks at harvest times.

Another example of magic Haddon and Seligmann (1904) cited was about people deemed to have special talents. The specialist position of rain-making or wind-making, according to their source “was hereditary in certain families and the same man performed both functions” (p. 350). These tasks varied from one island to another but essentially they involved the painting of the body, the application of some local ‘medicine’ (potion), and lots of chanting. Such practices they reported could bring on rain and wind as well as put a halt to them.

Haddon and Seligmann (1904) went on from here to also show that Islanders had a belief in supernatural beings. They reported that Islanders claimed to see giants and tailed-men and had “a belief in a class of powerful beings, or bogeys, termed dogai, who generally were on the look out to do mischief, but
who were easily outwitted and often killed; some however were good” (p. 353). A Dogai, they were told, was female and characteristically had large ears, and on one telling she had long white hair. They can lure, kill, and eat a person. They can transform themselves into most things, animals, trees, rocks, a star, and even a constellation. The authors cite from folk tales many instances of the transformation of people into animals, all of which have no other basis than in the lore of the people.

An account by Macgillivray (1852) cited by the authors, show Islanders who believed in “transmigration of souls” (p. 354). This account by Macgillivray conveyed the notion that Islanders believed that “immediately after death they... [would be] changed into white people or Europeans” (p. 354). However, there was another reading of this. Roth pointed out “that instead of a return of the deceased native’s actual body after death in the form of a European, the meaning intended to be conveyed was that the vital principle (spirit, etc.) is re-incarnated in the white man” (cited by Haddon & Seligmann in, 1904, p. 355). The influence of those from countries in the West is obvious: in both cases the ‘savage’ dies and is resurrected in the ‘civilised man’.

On the issue of spirits and the state after death, Haddon and Seligmann (1904) noted that it, “was extremely difficult, indeed practically impossible, to get any very definite information respecting the belief of the people as regards spirits generally” (p. 355). Yet there were clear signs of its presence. According to their linguist colleague, there was a distinction made between a ghost (markai) and a spirit (mari) - markai was the ghost of a dead person and mari was a “disembodied spirit” (p. 356). Haddon and Seligmann maintained that Islanders held a belief that “the soul, or ghost, mari, of a person... left the body at death” (p. 355) in that it was, in one telling, in the corpse, and in another, it was wandering nearby. Others, they claimed, told them of spirits who may leave the island to go to an unknown place in the West but could also come back. That is, at the time of death the “mari... is a very intangible.
sort of thing” (p. 356) and is said to travel West, always to the West, whereupon arrival at “spirit-land” (p. 356) he or she is met and taught how to be a ‘markai’. To verify this belief Haddon and Seligmann cited a case where an Islander pointed out that: “[w]hen the friends at home see a water-spout they weep and say, ‘[t]hey are now teaching him, he is now a proper markai and will forget us all’. They also cry at a new moon as the maei is then killed and converted into a true markai” (p. 356).

On the issue of ancestor worship, Haddon & Seligmann (1904) contended that “[t]he ghosts of the dead were neither regarded as demons nor divinities, nor do I think it can be said that they were actually worshipped” (p. 364). However, skulls of revered individuals and family members were kept in houses and, at times, carried as charms on various voyages. Haddon and Seligmann reiterated that “the preservation of skulls of relatives in the houses was due to the sentiment of affection and to keep the dead in remembrance” (p. 364). They found no evidence to support any view to ancestor worship in any of their ceremonies. That was an inevitable conclusion given that their stated position was that such practices had more to do with those practising religion not magic.

But they did admit to Islanders practising hero worship. Haddon contended however that “[t]he invocation of dead heroes... is part of the hero cult; they were prayed to solely as heroes and I did not find any indication that they had any existing human kin other than the totemic kinship. We cannot then regard the hero-cult as an ancestor-worship in the strict sense of the term” (p. 365). Macgillivray’s account amongst those from missionaries also supported this view, “[n]either at Cape York, nor in any of the islands of Torres Strait... do the Aborigines appear to have formed an idea of the existence of a Supreme Being” cited by Haddon & Wilkin, 1904, p. 378). The point they made here was that hero worshipping in the Islands can not be regarded in the same league as worshipping a Supreme God: “I think it can be definitely
stated that the Western Islanders had no deities and certainly they had no conception of a Supreme God" (Haddon & Wilkin, 1904, p. 378).

In summary, the small section on religion in the Eastern Islands in Volume VI (Haddon, 1908, pp. 241-280) encapsulates the Cambridge team's standpoint on religion in the Torres Strait. There Haddon pointed out: "[n]othing is more difficult than an attempt to discover and interpret the religious ideas of an undeveloped people, and I cannot profess to have succeeded in my efforts in this direction among the Miriam" (p. 240). The basis on which Haddon considered and defined what he meant by 'religious' is as follows:

The term 'religious' is applied in this memoir to those actions which depend for their efficacy upon appeal to, or reliance upon, something which is extrinsic to the performers or to the objects employed.... This non-human influence is usually of a more or less personal nature, and is approached by means of words or ceremonies, and operates through a ceremony or object, or directly on the petitioner of those in whom he is interested, or it accomplishes those aims which he desires. The extrinsic influence can also act of its own initiative. Usually an emotional relation is established with this extrinsic influence or power. (Haddon, 1908, p. 241)

The things that were to count as religious for Haddon were elements associated with a model of the Supreme God. For the Islanders, this did not amount to much if they worshipped odd things. Haddon considered four main icons worshipped by the Islanders: Lu baba, Ad, Zogo, and Aged. Lu baba was listed by him as the worship of items belonging to some ancestor. Ad was said to be "something old and traditional with the idea of a sanctity that is associated with ancient wont, thus certain folk-tales are ad" (p. 242). So too were tales of legendary characters or items of a sacred nature like "magical stones" (p. 242). Zogo on the other hand was considered to be an array of objects like rain, effigies, shrine, birds, plants, totems, etc. Haddon
claimed it was even more distant from religion because it could also be the
term for the whole rite associated with some form of worship. *Agud*, or *agud*
as known in the western regions, was according to Haddon, a name used for
the *zogo* that superseded all *zogos* and all totems. Nowhere in Haddon's
account is there any notion entertained that one of these icons has any
relationship with that of a human being with spiritual powers like Jesus Christ.
What is represented are those things worshipped in the Islands like stones,
plants, animals, legendary heroes, etc.

However, as Haddon allowed, the ways people engaged with their icons were
"distinctly religious" (p. 245). Such practices, and in particular those to do
with "Bomai-Malu *zogo*" were collectively a socialising religious factor in the
life of the people" (pp. 242-3). However, not much more was presented that
could be considered akin to the formal religious institutions in the West.
Instead, we see a representation of the people's spiritual and moral conscious
as embodied in rules of avoidance and rules of conduct – taboos. What
followed then were descriptions of taboos associated with places, gardens and
produce, names, and food as a demonstration of how such things impact as
rules of avoidance. Anything of 'religious' value in the Strait was thus
circumscribed as simple forms of taboos. And in closing the Chapter on
mythical beings Haddon (1908) wrote,

I am inclined to believe that neither among the Western
nor the Eastern Islanders has the idea of a definite god
been evolved. They have, I admit, come very close to the
conception, but do not appear to have taken the final
step, and I am tempted to connect this omission with the
absence of a definite and powerful chieftainship... hence
there was no autocratic social type upon which the
incipient demigods could be modelled and thereby be
transformed into actual deities. (Haddon, 1908, p. 316)

That is, according to the model of Supreme Gods in countries in the West no
equivalent religious order was found to be in existence in the Islands. Instead,
Haddon identified and substituted for religious experience a context of mythical experiences on behalf of the Islanders. Islanders were people, Haddon claimed, who had their spiritual being embedded in an array of supernatural phenomena that included giants, omens, dreams, divination, austerities and purification. They were people who worshipped various objects including legendary heroes, effigies, plants, animals, and totems. They were people who relied on magical and cult-like practices to help their garden to grow, to help them obtain girlfriends, or to hunt fish and wild animals. They were people who may seem to have some religious practices but these cannot be considered as the same as religion in countries in the West. The Cambridge scholars thus proclaimed: “We did not discover in Torres Strait anything like an All-Father or Supreme Being” (p. 316).

C. A Society with no government is a society with no formal institutions

The Cambridge team also found no formal system of government in the Islands comparable to what they knew about systems employed in countries in the West. They concluded from their short time in the Torres Strait that in the Eastern Islands, (prior to the missionaries and the Australian government’s presence in the region), “the method of governments... was probably by the elders, who followed traditional custom in coming to their decisions” (1908, p. 178). The Cambridge team contended also that thirty-five years prior to their own arrival there existed in the Western Islands “a simple form of government, which may be described as a limited democracy, or an oligarchy of elders” (1904, p. 264). What was believed to be in place in the Strait all those years before their arrival was a system of hereditary chieftainship. In this final section another attempt to model the old lifeworlds in the Islands according to organisational structures more familiar to societies in the West will be illustrated. In the Cambridge team’s treatment of the topic “Law and Government” (1908, p. 178) elements in the Islanders’ lifeworlds were again substituted. Furthermore, it will be shown that the Cambridge team’s deliberations on how the public and private were regulated
helped to reify the unequal relationship between 'them' and 'us', as well as constitute other aspects of the social world to characterise Islanders as having savage minds.

Need for an Authority of Some Sorts

Haddon (1904) struggled with putting together a picture of past regulation of public life. What was uppermost in his deliberations was a desire to discern those attributes of a communal life that could be represented as organisational structure, common rules, and some central authority that held it all together. This approach corresponded to the ways communal living was viewed in countries in the West. His first task was to identify the different forms of authority that existed in the Islands.

His brief sketch of periods prior to his arrival in the Islands began with an appeal to the genealogical records of Western Islander families: “the social duties of life were relegated by custom to definite members of the community as will be seen on a perusal of our accounts of Kinship.... Little appears to have been left to chance or to private initiative or enterprise” (Haddon 1904, p. 263). Having established a view about some basic structures in the community he then moved to incorporate a notion of hierarchy, division, and thus conflict as a basis for political interaction in Islander lifeworlds. He did this in order to establish a mechanism that could illuminate some form of authority. To make his case, Haddon (1904) outlined the organisational needs of traditional ceremonies:

The time for the performance of certain ceremonies was fixed by the appearance of particular stars, but these ceremonies had to be prepared for and various details had to be arranged, and this necessitated an executive of some sort that would command respect and obedience.... Disputes of various kinds must always have arisen in each community and some form of arbitration was necessary. (Haddon, 1904, p. 263)
Haddon chose to focus on a study of ceremonies in order to find an event that required some supervisory person. The ceremonies and feasts reported on involved whole communities and oftentimes several communities. Such events often required the involvement of many people to catch and kill numbers of animals and fish, to crop gardens, to get ready the earth ovens, to prepare large amounts of food for enormous feasts, catering for hundreds of people at a time. These kinds of events required special people to carry out the formal aspects to the ceremonies. Special dances and performances were also part of the whole spectacle. And, it also required an army of people to clean up after the event. To Haddon who was unfamiliar with these spectacles, it seemed obvious that in the past "there must have been many occasions for argument and misunderstanding in the inter-relations of a community however minutely its affairs may have been ordered by custom. To meet all these exigencies some form of government [must have been] necessary" (p. 263).

Rivers (1908) likewise reported that in the Eastern Islands it was "very difficult to understand... the social organisation of the Miriam people.... the most definite feature... is the existence of a system of exogamy in which the village is the social unit, but there also exist other groupings of the people which are of social significance" (p. 169). That is, where Haddon appealed to some mechanism within the ceremonial activities to demonstrate structure and control by some higher authority, Rivers based his conclusions about the authority on the order of things in the community to show that there were some elements that were at the basis of the social organisation of the community.

Rivers identified four possible ways of grouping social units on Mer, "firstly, a grouping in villages, of especial importance in connection with marriage; secondly, a grouping in districts; thirdly a dual division into two groups, called the Beizam Le and the Zageeb Le; and lastly, a grouping of people who are named after certain animals" (p. 169). Such groupings, he learned, had some
political influence in the order of things that determined even the day to day things. For example, in the first, in these social encounters people identified themselves foremostly as belonging “to a certain village which is the village of his [or her] father” (p. 169) regardless of their own birthplace or his/her relationship with the father. Such an influence, Rivers claimed, can also be seen in the arrangement of marriages: “the marriage of a man is definitely regulated by means of the village to which he belongs and by those of his mother and his father’s mother” (p. 169); people who were contemplating marriage would say, “I may not marry this or that village” (Islander cited by Rivers, 1908, p. 169). Such groupings by district Rivers claimed have a way of influencing how people identified themselves as well as who they can or can not marry.

The second grouping of social units considered by Rivers was the geographical feature of the villages as laid out in districts. By showing social groups by districts, Rivers was able to provide a basis of the hierarchical elements of a community. One district, for instance, he claimed, was named after their habit of eating raw fish “and it would seem improbable that it denotes a district of any social importance” (p. 174). Another, was to be “regarded as foreigners and have no place in the more important institutions of the island” (p. 172). In short, the point was that there were identifiable social groupings on Mer that could be equivalent, albeit in primitive ways, to what was known about segmented societies in the West e.g. distinctions of class, status, background, etc.

The third and fourth groupings of social units appeared to Rivers as “especially connected with the Bomai-Malu cult, and it is doubtful what is their special significance, or indeed whether they have any social significance at all apart from the Malu ceremonies” (p. 172). Most, it was claimed, were affiliated with the cult and they fell into two classes: the Beizam boâ and the Zagareb. The Beizam Le, had the shark as their symbol and were the head people of what Rivers termed, the fraternity. They were considered to be
more important than the Zagareb Le. By contrast, those in the class of the Zagareb Le were assigned a less responsible role in the fraternity. They beat the drums and sang. In a nutshell, the third form of grouping identified by Rivers was based on affiliations with a cult, and the fourth form identified the members within the cult who were named after animals. However, as stated above, there was uncertainty about whether groupings based on animals “were ever connected with the social organisation, though [as Rivers pointed out] the fact that all their neighbours of this people [in the western regions] have a totemic organisation can leave little doubt that their society was also at one time organised on this basis” (p. 174). That is, Rivers could find very little trace of a totemic system but because it existed in the Western Islands, and because they are all Islanders, he was “almost certain [that] it must have once existed.

In the basis of such deliberations and others seeking out past leaders and hierarchical forms of authority from the genealogies and totemic systems, Haddon and Rivers resolved that there must have been a simple democracy under the rule of elders. But, as they also noted, it was “difficult to say exactly what constituted a claim to the distinction of being an elder.... We have met old men who had little influence, and we know of middle-aged or even comparatively young men who have a decided weight among their fellows” (p. 263). Nevertheless, they were convinced that there was clearly the utmost respect for decisions made by the older folks. They then made some general remarks about what happened in the Islands thirty-five years prior to their arrival. They concluded that akin to practices in other lands Islanders had a simple form of government with a familiar “deference for the authority of age” (p. 264).

Regulation of the Public

Haddon considered the use of taboos in the Islander communities further to learn more about what constituted forms there were that provided the communal lifestyle with some cohesion. He learned that “there was merely
the customary usage or the orally transmitted law. There was no legal machinery by means of which these could he [sic] enforced, but it is probable these regulations were well kept on the whole as they had behind them the weight of public opinion” (p. 269). Here we will see the attempt by him and Seligmann to inscribe items such as taboos in some primitive correspondence with constitutions of Law and Order as they existed in the West.

Their deliberations moved in direction of taboos in general and sexual taboos in particular. A taboo, explained Haddon, generally operated tacitly throughout the community and was understood by all its members. There were taboos that could be placed on items that prohibited anyone else from owning them. He described how property, crops and other possessions were marked to taboo people from infringing on designated areas, houses, and trees. Other aspects of the taboo involved injunctions placed on the consumption of certain foods. Taboos, if broken, could bring severe reprimand by the person who was offended, by the magic man, by elders, by the community and in many forms. Taboos have the effect too, as Haddon described, that knowledge of a violation would bring about, for instance, elephantiasis. The fear of some physical deformity was enough to ward off the most determined person.

Sexual taboos, in particular, were singled out by Seligmann (1904) for scrutiny. He reported on various prohibitions and injunctions that constrained the Islanders. If sexual intercourse was indulged in before fishing and hunting trips, he reported that Islanders believed their chances of success would be spoiled. In the case of warfare it meant that bad luck would accompany them. Seligmann maintained that this bad luck took the form of risking an acquired infection which would attract the missiles of the opponents rather than weakening the warriors ability to attack. This he noted could be likened to menstrual taboos as practised in other countries. In another, Seligmann pointed to cases where men or women performed sex before sacred rituals. This, he said, would mean to the Islander that a male would spoil the food.
And in the case of the same act by a female, it was said that she would be shamed. Chastity, then, reported Seligmann, was to be “recommended.... [and] it was generally found expedient to abstain” (p. 271). His references to the restriction of fornication and adultery bring an end to his list of things that taboos regulated.

What both Haddon and Seligmann attempted here was a description of some characteristics that might constitute a formal legal system comparable to written ones he was familiar with. In the Islanders’ case, however, they were unwritten, constitutions. In this section on the regulation of public life, we can see from the above descriptions that Islanders were being constructed as communities ruled by taboos, or a primitive set of prohibitions and injunctions. Although Haddon and Seligmann were unable to discern any supporting institution to enforce these, they claimed taboos were regulated either by the self or by public opinion. Their analysis points to the conclusion that thirty-five years prior to the arrival of the Cambridge team, the people in the Torres Strait Islands were regulated by superstitious beliefs in a primitive constitution of taboos.

*Regulation of the Private*

In the ‘old days’, and according to Haddon (1904), a “definite system of morals was inculcated to the lads during the period of initiation... and that it was an excellent code” (p. 273). At these initiations, the younger generations were to have learned that,

The injunctions were: remembrance of admonitions, reticence, thoughtfulness, respectful behaviour, prompt obedience, generosity, diligence, kindness to parents and other relatives in deed and word, truthfulness, manliness, direction in dealings with women, quiet temper. The prohibitions were against: theft, borrowing without leave, shirking duty, talkativeness, swearing, talking scandal, marriage or connection with certain individuals. (Haddon, 1904, p. 273)
To Haddon (1904) it was “fairly evident that the obligations of the social life were at the basis of the morality of the Torres Strait islanders [sic], indeed it would be scarcely incorrect to speak of it as social morality. On the other hand individual morality had scarcely emerged” (p. 272). The attempt here to provide a moral fibre to these people in the old days was honourable but the injunctions and prohibitions listed above is very suggestive of the Christian doctrines so valued by those in the West. However, as Haddon pointed out, there was “no reason to suspect any trace of missionary influence” (p. 273). In the old days then, and according to Haddon, there were identifiable forms of social morality that provided the basis to the ways Islanders carried out their private lives.

But, as he pointed out, clear distinctions needed to be made between social morality and individual morality, that is, distinctions between “them” and “us”. The first, social morality, was characterised by Haddon as those forms of morality that were codified in terms of an understanding of what is acceptable behaviour in a community and was regulated and enforced by members. The second, individual morality, to Haddon, were those forms enshrined in important articles like for instance the Ten Commandments wherein they laid down moral codes for things sacred like the preservation of the Christian Soul. The latter forms differed because they abide by some external authority like God. And as far as Haddon knew it, Islanders had no Supreme God. The division thus between “them” and “us” also could be seen in terms of different moral codes.

Haddon (1904) turned then to provide an example of this as well as to indicate a shift towards Christian values in later periods. At the time of their visit, he said, things had changed somewhat because of the influence of missionaries, “together with the contact with other white and coloured men, [this influence] has undoubtedly brought about altered moral conceptions. The clearest example of this is to be found in their attitude towards the wearing of clothes and the idea of modesty” (p. 272). “Thirty years ago”
Haddon exclaimed, these people were “absolutely naked and unashamed” (p. 272). He went to cite an incident where his team members found it difficult to get an Islander to strip off his clothes and to pose in the fashion of a dying legendary hero so that the Cambridge team could photograph him. Something they described as evidence of “prudish” (p. 272) behaviour. Haddon’s intention here was to illustrate the emergence of a consciousness of the self as laid down by moral codes set down by some “external authority outside of the community” (p. 272). Consequently, it could be claimed that in the ‘old days’, the Islanders had no individual morality or, no external referent that could moralise the naked body in such ways. Thus leading to the view that Islanders had a system based on social morality as determined by the community alone.

In a further attempt to provide some basis to the Islanders’ moral constitution, Haddon (1904) provided some data on “domestic morality” (p. 274). However, as he conceded, they did not learn much about ‘the position of women’ in the early periods but as he did “believe that on the whole the wives had not much to complain about” (p. 274). He was aware of documentations by people like Macgillivray (cited by Haddon) that depicted Islander men as ‘wife-bashers’ but contended that they were “defective” (p. 274). If it was so, Haddon said, it may be because the group cited were “less advanced than the other islanders [sic]” (p. 274). Or, that it may have been because of “the lack of gardens and the hunting and collecting nomad habits of the men [which, Haddon contemplated] would tend to make them less considerate to their wives” (p. 274). Here then we have two codes of behaviour towards women. One for those Islanders who till the soil and who are caring towards women, and another for those who roam the region and who were not caring towards women.

On sexual morality, Haddon (1904) reported that incest was considered by the Islanders to be the most reprehensible act. Sexual morality, he explained, was also a very good determinant in who could marry who. But importantly,
he said, this was "an example of a social convention which was probably of fundamental biological importance to the community" (p. 274). His other "impression is that chastity before marriage was formerly practically unknown" (p. 275) and yet he added, "there was no term for fornication or adultery" (p. 274). He says, however, there was a word for theft, *pusu*. And in these ways, Haddon effectively enabled adulterous acts by Islanders to be termed as "stealing" (p. 275). And subsequent also to this, it also enabled him to express ideas of wives and women in general as "property" (p. 275). If caught 'stealing', he went on to say, there was an expectance that they should marry "to make them honest folks" (p. 275). If they were not shamed into getting married, physical markings were made on their bodies as posters for public humiliation. But what is suspect about the analysis here is that in trying to set up sexual morality as a social convention in the Islands in the old days he contradicts his colleague Sidney H. Ray (1907), the linguist who on the trip, listed on page 170 of Volume III of the Cambridge Reports in his English to Islander languages dictionary the following terms for adultery: kupa-kuasar, kuasar-kupa (in the language of the Western Islanders); Kogem, Kosekerlam (in the language of the Eastern Islanders).

Haddon also wrote on "commercial morality" (p. 276). He was of the understanding that in commercial transactions, particularly in cases where canoes were purchased on the basis of an "instalment system" (p. 276), there would have been some "utilitarian foundation" (p. 276) by which credit was established between two people. He contended that there was not only such a system in place but that there was an accompanying moral code by which Islanders were bound. To this he added, it would have been senseless to violate any agreement when one's livelihood was swinging in the balance, as one Islander told him, if we do not observe such conventions "how we get fish, or turtle, or dugong" (p. 276). It was rarely the case that anyone would have been dishonest, he remarked.
Haddon and his team went on to consider the regulation of the private spheres, in the days before any encroachment from the West, most extensively. They documented women's puberty customs, birth and childhood practices, the formalities of the initiation processes, rituals in courtship and marriage, how marriages were regulated, as well as the practices associated with funeral ceremonies. These Reports came to be regarded as the most extensive anthropological description of the culture of people in periods before the onslaught from the West. The topics pursued and described by the men from Cambridge were done with a view to charting the constitutive characteristics of the savage mind. What we see, however, is the way their observations on what constituted the savage mind were influenced by implicit aspects of their own history. Where others in the past have read these documents as depictions of the culture of a people, I have tried to follow literally the way non-Islanders attempted to understand the constitution of primitive minds. Nowhere is the process of constructing the savage mind more explicit than in the final two examples.

D. A society of people with no historical knowledge, no supreme God, no government is a society of savages

Haddon (1904) observed from his notes and folk tales that extensive trading, by exchanging goods, occurred between Western Islanders in their region, with mainlanders from Papua New Guinea and Australia, as well as with "white men" (p. 293). The exchanges were mostly described in the sense of bartering goods like crafts, dance masks and drums, foods, plants, sea shells, turtle shells, tools, bows and arrows, iron (from shipwrecks), canoes, feathers and plumes of birds, tobacco pipes, and so on. He mentioned also an extensive network for the purchase of a canoe, that spanned the breadth of the Torres Strait region and involved many middle men and their contacts, and protocols in negotiating a canoe, as well as the art of testing the soundness of the material and craftsmanship, and buying on credit. By contrast, in the Eastern Islands there were perceived to be two trade routes to Papua New Guinea and none to the Australian mainland: "the Miriam were
practically debarred from intercourse with Australia” (Haddon, 1908, p. 185). The people of Mer also exported crafted shell ornaments and imported ornaments crafted from cassowary feathers, bird-of-paradise feathers, dogs’ teeth, boars’ tusks, leaves of sago palms, pandanus leaves, and items such as canoes, drums, mats, stone-clubs, etc. And there was trade as well with foreign sailing vessels according to Haddon. Local produces, craft work, ornaments etc. in the latter case were bartered for iron, knives, axes, etc. Wilkin (1908), on the other hand, described a very complicated inheritance pattern of land ownership in the region that seemed to him to favour men. He remarked that in these parts of the world, “[t]he sense of property is very well developed” (p. 168). In all, these could have amounted to very progressive societies in the Islands engrossed in maintaining and negotiating lifeworlds with self-interested views. But, as with all enterprising ideas, according to a Western standpoint, there must have been “quarrels and warfare” (see Haddon, 1908, pp. 189-191).

The following deliberations by Haddon and Wilkin serve to remind us that no matter how enterprising the Islanders were they were still Savages. What is presented as data however is basically an account of very like-events. These two men gathered data from many sources to demonstrate the savage disposition of the people in these parts of the world.

In the Eastern Islands Haddon (1908) said, “[t]here is no doubt that their vain-glorious excitable temperament led to frequent squabbles, but they expended most of their energy in words” (p. 190). He provided one account of a quarrel amongst Islanders on Mer and one against the South-Sea men living at Dauar. From the latter account, Haddon pointed out that, “although they were great braggarts, the natives were unskilled in fighting, probably owing to lack of practice on account of their isolation” (p. 191). In the Western Islands, however, Haddon (1904) identified three distinguishable kinds of fighting. They were “blood feuds” (p. 298), “head-hunting” (p. 298), and “ceremonial fights” (pp. 298-9). It was the condition of Islander people
in the old days, according to Haddon, that "[a] life for a life was the recognised doctrine" (p. 298) and blood feuds thus were enacted as "reprisals for injuries" (p. 298). In contrast to this, head-hunting was "to gain glory and the approbation of their women" (p. 298), and ceremonial fights were for "settling quarrel when there were more than two people concerned, and assumed quite the character of a duel upon a large scale" (p. 299).

What followed was an even more marked shift in the emotive language used elsewhere in the six volumes of materials on Islanders. In short, it exemplifies the Western pre-occupation with describing blood and gore in 'savage' peoples. All supporting evidence of barbaric acts were drawn from the story of the two survivors of a shipwreck, 'Charles Eaton', on an Eastern Island reef.

Haddon began by citing from the account of the shipwreck 'Charles Eaton':

... the savages on Boydany [sic] Island ate the eyes and cheeks of the shipwrecked people. This they were induced to do from a peculiar notion which they entertain, that such conduct will increase their desire after the blood of white men. (Wemyss cited in Haddon, 1904, p. 302)

He went on to add that the surviving members were 'brained' by the Islanders. Most of the other descriptions in this section seem to arise out of this one. Indeed, it appears to be the familiar Western genre for describing 'savages' involved: first describing nasty things savages do to one another, and then providing an explanation on the primitive psyche of the savage. Thus reifying debauchery, treachery, and ghoulish behaviours. Macgillivray (cited by Haddon) provided the best example of this:

The Kauralaig returned to their island with much exultation, announcing their approach by great shouting and blowing on conchs. The head were placed on an oven and partially cooked, when the eyes were scooped
out and eaten with portions of flesh cut from the cheek; only those, however, who had been present at the murder were allowed to partake of this; the morsel was supposed to make them more brave. A dance was then commenced, during which the heads were kicked along the ground, and the savage excitement of the dancers almost amounted to frenzy. The skulls were ultimately hung up on two cross sticks near the camp, and allowed to remain there undisturbed (Macgillivray, as paraphrased by Haddon, p. 300).

Another, by Wilkin, as paraphrased by Haddon, claimed that

After an enemy had been hit on the head with a stone club, a cut was made all round the neck with a bamboo knife, the head was then taken with both hands... and twisted one way with a long-drawn 'Ah!'; then it was twisted the other way round with a short 'Isu!' After this the head would come off with 'kluk', at which the warrior would say, 'Ah---, kawai, kawai, Ah---, kawai, kawai', and he would repeat these words all the time he was threading the head on the singi or ratan head carrier.... The men returned to Pulu and made an earth oven in which the heads were partially cooked and the lads who had been at this their first fight when an enemy had been killed were given the cheeks and eyes to eat 'to learn him' and to make him brave and fearless" (p. 301).

Either the cheeks and eyes were the most prized by the Islanders, or we have here again a possible predisposition for the language used in the same account of the shipwreck 'Charles Eaton'. The account subsequently got more graphic.

Sometimes when a Mabuiag man killed another in a fight and had cut off his head he would hold up the head and let the dripping blood fall into his mouth and would also give some to the young man who accompanied him but who had not yet killed his man, saying, 'you do not know how to fight. You drink it and it will give you strong heart. (Haddon, 1904, p. 301)
He then adds another from the Central Islands:

Tutu men also drank the sweat of renowned warriors, and ate the scrapings from their finger-nails which had become saturated with human blood; this was mixed with their food in order 'to make strong and like stone; no afraid'. A Tutu warrior would tear out the tongue of a man he had just killed and eat it on the spot. The penis was usually also cut off by Tutu men; before a fight they would blow through the dried penis in the direction towards which they were going. (Haddon, 1904, p. 301)

The next description provided by Haddon is from Naghir Island (my family's island), where he claimed to have been told that,

... in order to infuse courage into boys, a warrior took the eye and tongue of a man he had killed and after mincing them and mixing them with his urine, administered the compound in the following manner. He told the boy to shut his eyes and not look, adding, 'I give you proper kaikai'. The warrior then stood up behind the sitting youth, and putting the head of the latter between his (the man's) legs, would feed him. After this dose, 'heart belong boy no fright'. (Haddon, 1904, pp. 301-2)

From the most north-eastern end of the Torres Strait, Haddon reported an account by Chalmers (cited by Haddon) that "the muscle behind the ear is given in sago to lads in Kiwai Island to eat that they may be strong" (p. 302).

The final example comes by way of Wilkin's descriptions in a section titled the "Preparation of Heads for Augudalkula" (p. 305).

On the conclusion of the festivities which followed a victory (or massacre) the heads of the slain were taken by their owners to Pulu to be cleaned. A great earth-oven was dug and, after the scalps had been cut from ear to ear and from back to front, the heads were subjected to a short period of cooking which rendered them easy to skin and at the same time, so far as they were eaten, more palatable - for the boys were compelled to partake of the
cheeks, eyebrows and eyeballs on pain of castigation. The object of this mild form of cannibalism was to develop those manly qualities whose crowning glory was the acquisition by the young warrior of a head of his own taking. (Wilkin, 1904, p. 305)

All the above extracts appear to cover every corner of the Torres Strait, and give the impression that such practices were rife throughout the Torres Strait in the earlier periods. It needs to be noted here that these events described were not founded on a single observation made by the Cambridge group. It is also interesting to note that Haddon elsewhere noted that anthropophagi, or cannibalism, was not a practice found in the Islands.

Nevertheless, Wilkin (1904) went on to provide a narrative of feud and native warfare amongst Islanders and again featured treacherous cannibals and their ghoulish behaviours.

At Pulu they cut the heads from ear to ear across the scalp and slit them from back to front even to the end of the nose and down to the teeth.... The small boys they constrained to eat the cheeks and eyebrows and the balls of the eyes, and those that were unwilling they beat, for unless a man do this in his youth he will remain a woman or a child all his life long. Moreover when he has taken such a head for himself in battle he is to be accounted fit for marriage. (Wilkin, 1904, pp. 313-4)

The repetition of tales told to them by Islanders of feuds, warfare, head-hunting, and massacre seems to stretch out across the Strait. But, as Haddon tried to clarify in the footnotes to the aforementioned quote, there is a need to remain sceptical about it all: "[t]he narrative give a vivid picture of native warfare, and we may regard them as being as accurate as most historical records which are narrated by the conquering side. These are accounts of historical events, but it is not difficult to imagine how these could easily be transformed into hero-tales and so become folk tales" (p. 308). To re-emphasise the point here, Haddon stressed that accounts provided to people
such as Wilkin need to be viewed with caution, as they may have been exaggerated forms told by Islanders championing their stature as proud warriors. This seems to imply that by contrast he and his fellow travellers’ recounts were not in any way exaggerated or far-fetched. The following examples of their reporting, however, beg the question.

Infanticide

Contrary to the ‘savage’ entity, there were many instances that indicated that there was a sense of kin relations amongst Islanders. For instance, Seligmann indicated that at the time of their visit there were close bonds between parents and their children. He cited two stories to indicate a close relationship with each other in older periods. “The story of Siwi shows spoilt children were not unknown, and Amipuru tried to catch a pelican in order to give it to his child” (1904, p. 199). He later commented that the older kinfolk not only provided care but also organised celebrations for girls during puberty customs and for boys during their initiation which recognises a time and role of younger generations to create new generations (see 1904, pp. 201-221).

Haddon too made comment that indicate such a bond between parent and child: “[w]hen the wife is pregnant a wazi:wi is paid, presents are given when the child is born, when he is named, a small present is given when he first stands up, again when he begins to talk and also when he kills his first bird or catches his first fish” (1904, p. 232). Rivers too passed comment on this: “Divorce appears to have been rare” (1904, p. 246); but for one main reason divorce could be achieved if the couple were childless. Haddon, emphasised that he had no reason to believe that “devoted fathers” (1904, p. 229) were not there in the past: “I have never heard of a parent ill-treating a child” (p. 274). He later cited from old folk tales to support his position on this.

Notwithstanding the aforementioned, Seligmann’s (1904) citation of “infanticide” (p. 198) referred to earlier claims made by Haddon (1890) and Macgillivray (1852) and in doing so incorrectly provided a view of Islanders as killers of their infants, in particular, female infants. Haddon said, “infanticide
was undoubtedly a common practice” (cited by Seligmann, 1904, p. 198) in the islands. Macgillivray on the other hand said that he learned that there was only “the occasional practice of infanticide” (cited by Seligmann, 1904, p. 198). What he learned from these two separate accounts were strikingly similar. He learned from Haddon that:

At birth a father would decide whether a child was to be permitted to live; if he decreed its death it was simply buried in the sand. As a rule female babies were less likely to be permitted to live than boys. (cited by Seligmann, 1904, p. 198)

What he learned from Macgillivray was very similar:

Few women rear more than three children, and besides, most of those born before marriage are doomed to be killed immediately after birth, unless the father - which is seldom the case - is desirous of saving the child; if not, he gives the order *marana teio* (throw it into the hole), and it is buried alive accordingly. (p. 198)

Seligmann subsequently had to acknowledge these accounts in order to write something into the section on the treatment of children:

Although foeticide and infanticide were formerly practised the desire for children is now manifest by the frequency of adoption and by the readiness with which the charge of orphan children is assumed by their relatives.... At the present time parents treat their children with kindness and indeed they may be regarded as indulgent towards them” (Seligmann, 1904, p. 199).

This was an attempt to characterise Islanders in former periods as ‘savage’ baby killers. Not one of the scholars involved in writing these accounts claimed to witness any such event. Nor did they explain how many infant deaths it took to claim that it was ‘a practice’ in the Islands. Furthermore,
their superficial understanding of Islander ways might have led them to make a gross error here. The Islanders had (and to a certain extent still continue to have) a belief that when someone dies it is because another has had a hand in the death - that is, they have a ready disposition to view deaths as the result of the wrath of a devious other. For instance, in describing funeral ceremonies, Haddon noted that on announcement of the dead, “the brother of the dead man ‘got wild’ and took his bow and arrow and wished to kill the maideig (sorcerer) who had caused the death” (p. 248). His footnote on this stated, “[a]ccording to native belief all sickness and death were due to sorcery” (p. 248). The point to be made here is that if an Islander was asked how a baby died there was already a disposition to blame and name someone. In other words, when one asked about the death of a child an Islander was likely to attribute it to foul play by someone, regardless if babies died from particular illnesses like small pox.

Many stories by fellow Westerners are cited in these Reports to support their position on the murder of children.

Reverend A.E. Hunt - on foeticide:

Abortion was very common, for various reasons: sometimes (as in the case of a single girl) from shame, sometimes to save the mother the trouble of child rearing.
(cited by Rivers, 1908, p. 107)

Reverend A.E. Hunt - on infanticide:

After a certain number had been born, all succeeding children were destroyed, lest the food supply should become insufficient. If the children were all of one sex some were destroyed from shame, it being held proper to have an equal number of boys and girls. (cited by Rivers, 1908, p. 107)

Dr W. Wyatt Gill - on infanticide:
The custom here [Erub] and at Murray Island (and we believe throughout the Strait) had hitherto been to rear only two children in each family. The rest are strangled or buried alive by the cruel father as soon as born. Illegitimate children were invariably murdered by the mother, to avoid the toil of having to provide food for them. (cited by Rivers, 1908, p. 108)

d’Albertis – on infanticide:

it is the custom to kill the female children at birth in Erub. (cited by Rivers, 1908, p. 108)

Rev. A.W. Murray – on infanticide:

the rule at Darnley Island was not to rear more than three children. (cited by Rivers, 1908, p. 108)

Mr Bruce – on infanticide:

Infanticide is not now practised, although it was formerly.... Female children were more frequently killed than males.... Male children would also be destroyed if the parents had what they considered a large enough family.... The parents considered that the male child assisted to perpetuate the name and family, but that the female did not do so.... girls required too much looking after when grown up, through young men coming to see them when they were working in the gardens, so that they were a hindrance rather than a help in the garden. Also at night the parents could not get their proper rest, through having to be continually on the alert, lest their daughter should be stolen by the young man.... if the husband or wife had a quarrel with someone, they might be taunted with having a large family, and be told that all the people were talking about them... and they would then be greatly ashamed, and decide that the next child born should die.... If the parents of the child were an old couple, they feared the ridicule and gossip... and the child was invariably killed.... The father was generally consulted if he wanted the child to live, but not necessarily so if the
woman herself desired the death of the child. Sometimes the husband ordered it to be destroyed and might perhaps do it himself; or the parents might arrange beforehand that the infant should be destroyed at birth.... When the child was to be destroyed the father killed it by pressing the head with his hands over the brain... or strangling it with a cord.... They buried the body at night near the house, or took it out to the edge of the reef and sank it in the deep water with stones, as an unweighted body has sometimes turned up again on the beach. (cited by Rivers, 1908, p. 108)

The same Mr Bruce - on how things have changed since missionary intervention and the realisation of commercial industries in the Strait:

Parents now find it profitable to have large families, for the sons can find plenty of employment in the pearl-shelling fleet... it means many luxuries to the parents, in the way of calicoes, coats, and trousers, camphorwood boxes, tobacco, and so forth.... Daughters are also found now to be very valuable property, for they are always in great demand in marriage, by their own countrymen, and also by South-Sea, Malay, and Manila man... the highest bidder, the man who can give the most, is the husband the parents choose for their daughter. (cited by Rivers, 1908, pp. 109-110)

However, it is worth mentioning that Rivers (1908) also noted that "[a]lthough foeticide and infanticide were commonly practised, the desire for children is manifested in the frequency of adoption and the readiness with which the charge of orphan children is assumed by their relatives" (p. 110). Again on the following page, he pointed out that the "fondness of the parents for their children, own and adopted, was very obvious, and one frequently sees a father nursing young children. It is evident from the fearlessness of the children of all ages and the way in which they mix with their elders that they are uniformly well treated" (p. 111). But the point of such accounts were not intended to counter perceived practices of infanticide but to note that such
practices amongst primitive folks, had through contact with the West, changed in favour of Christian values.

It is easy to understand from Rivers’ compilation of other people’s writings that because of a limited food supply in the Islands, there was a ‘custom’ to control population numbers so ‘to avoid the toil of having to provide food for them’. This explanation provides the basis of understanding why families were restricted to two children according to Gill, or three if we take Murray’s position. Once the reason and the need for infanticide is articulated in this way it follows that the practice was an unwritten ‘rule’ of a people that is to not rear more than three children, to kill illegitimate children, to kill female babies at birth if there were too many children. Again, not one of Rivers sources claim to have witnessed these practices. It is hard to make any counter claims against so many citations of the occurrence of such practices.

However, there was some statistical data on Islander families that was put together from the genealogies that were documented on Mer in an attempt to support their claims that blur the soundness of their conclusions. A Miss Hingston put together some data that showed the average number of children in families. She, for instance, found that “2.6 is the average number excluding marriages in which there are no children, and 3.6 excluding also those in which there is only one child” (cited by Rivers, 1908, p. 108). Her data showed that in the present generation (at the turn of the Century) 138 families had 264 children. She recorded an average of 1.84 children per family. The raw figures were as follows:

- 1 family had 10 children
- 5 families had 6 children
- 11 families had 5 children
- 6 families had 4 children
- 23 families had 3 children
- 19 families had 2 children
- 38 families had 1 child
- 35 families had none
In the second generation, the data showed 160 families of 409 children, with an average of 2.55 children per family. The raw figures were:

1 family had 12 children (11 boys and 1 girl)
5 families had 7 children
3 families had 6 children
16 families had 5 children
19 families had 4 children
27 families had 3 children
37 families had 2 children
33 families had 1 child
19 families had none

In the third generation, the data showed 56 families of 209 children with an average of 3.73 children per family. The raw figures were:

2 families had 7 children
7 families had 6 children
10 families had 5 children
9 families had 4 children
9 families had 3 children
11 families had 2 children
8 families had 1 child

In the fourth generation, the data showed 9 families of 27 children with an average of 3 children per family. The raw figures were:

2 families had 5 children
1 family had 4 children
3 families had 3 children
1 family had 2 children
2 families had 1 child
19 families had none

In the fifth generation, the data showed 2 families. There were 5 children in one and 1 in the other.
Rivers (1908) then suggested that if we take "the second and third generations only, so as to eliminate missionary influence, we find that the average numbers in the families of above three children were respectively 4.8 and 5.7. Ignoring families of 0 [children] or 1 [child], there is an average of 3.41 in the second generation and 4.18 in the third" (p. 108). These are respectful figures for a growing population. In real terms, and by their own accounts, there was no statistical evidence to support any claim that could amount to a practice of foeticide or infanticide in the islands. Furthermore, no evidence could be found for the claim that female babies were killed in preference for males: "[o]ut of a total of 915 children, 489 or 53.4% are boys, and 426 or 46.5% are girls, thus female infanticide does not appear to have produced a very marked effect upon the relative proportion of the sexes" (p. 108). Added to this is the fact that given that there were no sightings by anyone of any such incident and given there was no statistical evidence to support such 'practices' as claimed by all of the above their conclusions about the practice of infanticide were suspect and in need of revision. Rivers, however, maintained that despite these analytical shortcomings "these figures tend to show that while foeticide and infanticide doubtless were prevalent, their practice did not seriously tend to affect the actual population of the island of Mer, though they prevented over-population" (p. 108). Even when their own data told them otherwise, there was still an imperative to maintain the distinctions between 'them' and 'us' - distinctions that made the Islander both inferior and unequal in moral values and social behaviour.

Summary

One of the principal aims of this exploration of the anthropological texts and the charting of Western knowledge systems as they interface with Islander positions and experiences was to illustrate that in all the well-meaning interventions by non-Islanders there are indeed consistent processes to be seen as well as ongoing refusals of Islander positions. However slight, or trivial, or insignificant, these refusals may seem, the cumulative effect has been the denial of the independent intelligence and an ongoing patronisation
of the intelligence of these people as something secondary to what Western societies are more used to.

The Cambridge Expedition, as can now be seen, was an early attempt by people from outside the Torres Strait to chart the savage mind and how the savage mind projects a community, not some apolitical approach to documenting a culture of a people. This perspective on their writings is yet to be considered. But it is not to suggest something sinister or underhanded. It was something that was quite clearly stated by the academic scholars. McDougall, for instance, in his study of Cutaneous Sensations noted that "it was a principal object of our work to discover, if possible, racial characteristics" (McDougall, 1903, p. 189). It is more to note that these Reports are yet to be considered as a discursive site that brought to bear on Islanders an epistemological schema that made credible a particular way of positioning the Islanders into the various institutions and histories of the West. It is more to note that basic questions still need to be asked about the epistemological schema that deploys a science that arrives at statements about the intellectual capacity of Islanders qualified by:

I think... There can be little doubt that... It is natural that... It seems possible that... [and with all things considered, conclude that they], may help to account for another characteristic of the savage mind. (Rivers, 1901, p. 45)

It is more to note that when the numbers do stack up in favour of the Islanders the Western knowledge systems is able to appropriate a higher position for non-Islanders and a lower one for Islanders as savages who kill their infants. It is, to say the least, to make the point that questions still need to be raised about forms of analyses that continue to inscribe Islander positions into an order of things according to those in the West.

Perhaps it could be argued that this tendency was in part an expected outcome of the research process. That is, in the process of research the
Islanders were transformed into subjects of study and this action in itself resulted in a temporary ‘suspension’ in time and an intellectual dislocation of Islanders from their own historical trajectory. This means Islanders are represented not only through comparisons and ‘dissimilarities’ with non-Islanders, but also as ‘discontinuous’ with both the Western history and their own Islander historical trajectory. It is as if they were just there, enclosed in the Strait, marooned on islands, waiting to be named, related, and categorised by the more enlightened people of the West. This may seem an obscure point but I would argue that this is a crucial point to help understand how Islanders have historically been positioned and how their position is understood currently.

What this ‘suspension’ and ‘dislocation’ of Islanders from their own historical context achieves for the academic scholars is the transformation of people into objects to study. It is the intellectual construction of a ‘neutral’ position from which to view and understand Islanders. By not considering Islanders’ historical trajectory, that is, what has come before, what is occurring in the now, and what the implications are for their future, the Cambridge scholars were able to divorce themselves from the politics of the Islanders’ predicament, the politics of colonial activity, etc. They are left to ‘impartially’ describe the Islanders, their languages, psychology, and customs.

By ‘dislocating’ Islanders from Islanders’ own historical context as they went about constructing ways for understanding Islanders, Western scholars achieved much more than a ‘temporary’ dislocation of Islanders from their historical context. They suspended their own connections to the political nature of colonial activity. They stood themselves outside of the activities of Western colonial expansion as if their intellectual discipline had no connection to this when in fact the expansion of Western knowledges, especially anthropological knowledge, was tied inextricably to Western colonial activity. They sutured over and rendered invisible, through this process, the politics of their practice, the political effects on Islanders of their
practice, the political nature of their texts, as if the whole context of their activity was devoid of any politics, and as if the position of Islanders in this process was devoid of politics.

It is in this way that the activities of scientific knowledge construction, as exemplified in these texts, appear to us to be logical, objective and benign in terms of their effects on Islanders. But the scientists' activities were far from benign, far from being merely descriptions of the 'state' of Islanders at the time. They were part of a much wider web of activities that, through denying Islanders their own historical context and the political nature of their position could then easily view and re-represent their position in apolitical ways in relation to a different order of things. In that this became the only way for non-Islanders to understand Islanders it was political intervention in the extreme.

In this process the Islanders' own worldview 'disappears' and is rendered invisible and unintelligible. The position of Islanders can then be rewritten into another set of relations, namely in relation to Europeans and their worldviews. Thus the Islander position is intellectualised as 'Other' in its attachment to the Western historical trajectory. In this practice there occurs a denial of and a refusal or inability to engage with the Islanders' own analyses and understanding of their position, to view and acknowledge them as politically independent people on their own historical trajectory. They are in effect 'depoliticised' and accepted as Other and secondary to all Western positions.

The legacy of this remains to this day. We tend to view the intellectual practices of these scientists as belonging to a long-gone historical context rather than see them as belonging to the intellectual and scientific context in which current practice is still embedded. We tend to think that the practices of these scientists went home with them when they left the Strait. But these practices are still with us and in this sense, like the missionaries, the scientists
have never left. Islanders, too, have never been 'returned' to their own socio-political historical context and understood from that position. They have been left in limbo – suspended in a discursive space waiting to be appropriated once more. And as we will see in the next Chapter, Islanders emerged in government welfare regimes as 'dependents' and perhaps more notably, as in a parent/child relationship.

Such practices of the Western knowledge systems, as demonstrated here with the Cambridge Reports, have sanctioned a particular discursive relation between non-Islanders as explorers and founders of 'truths', and Islanders as a 'subject' to report on as well as an 'object' to later profess about. Because of the failure to consider these two crucial aspects of the text produced by the Cambridge scholars as well as the readiness to accept the primacy of Westerner schemas without question, relations between Islanders and non-Islanders continue to be institutionalised in ways that are now taken for granted.