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Editorial

The editorial team are proud to welcome you to Volume 2 Number 1 of *Estro* – the first issue of the 2009/10 academic year. Continuing the standards set by the first issue, we believe that the work presented herein is among the best at the University. *Estro* seeks to promote the work of undergraduate and postgraduate students at Essex: to this end, Vol. 2 No. 1 offers a varied selection of articles that are not only of a high quality but also represent some of the specialist areas that are unique to the University.

To open the issue we have an article that fits the journal's mandate perfectly, exploring an issue that crosses many disciplines. 'The History of Intersexuality' considers the binary notion of gender and the origins of the social and medical attitudes toward intersexed individuals. In doing so, the author bridges biology, psychology, philosophy and sociology. Following this we have 'Four Versions of Xanadu'. As an example of "Oulipo" – a specialist area at Essex and the subject of both undergraduate and postgraduate modules – it showcases a genre of creative writing that is similarly interdisciplinary in spirit, using mathematical principles to place constraints and conditions upon the writing process.

While Oulipo plays with language, our next article analyses it. 'The "Fingerprint" of Vox Pop Interviews' looks at conversation analysis and examines the nature of vox pop interviews in terms of the concept of "institutional talk". In 'A reading of the "ox-'ahaal" (3-conquest) stairs of Yaxchilan' we continue to expand the scope of subjects covered in *Estro* with an article examining Mayan hieroglyphic stairways, and the significance of one particular panel. This article will be especially interesting to students and staff engaged in the study of myth – another specialist area at Essex.

Moving from the ancient to the modern, 'Carer or Career' explores the current debate surrounding the professionalisation of nursing. This debate was brought into sharp focus recently due to an announcement by health minister Ann Keen, in which it was confirmed that degree-level qualifications will be a requirement for new nurses from 2013. The editorial team at *Estro* were keen to include this article as an introduction to this debate as it explores many of the theoretical and practical issues that affect the future of nursing. 'Lost in discussion: Subjectivity and its organisational implications', continues the focus on professional contexts, delving into the effects of subjective perception upon decision making.

As the second part of a study that featured in the first issue, 'Identifying Dyslexic Students' looks at another contemporary issue and argues for change in the testing methods currently used to identify dyslexia in academic institutions. Finally, we have a second statistical study in 'Social Capital and Marine Resource Management in Kaledupa, Wakatobi Marine National Park'. This article focuses on how the

social interactions between communities in and around the WMNP have an impact on conservation efforts, and what might be done to improve these relations. Again, this is a topical issue, with the potential destruction of coral reefs being a serious problem in relation to environmental protection.

We hope you enjoy the issue. As *Estro* develops, we aim to bring you more articles of the standard found within, and to present distinctly Essex-flavoured work that deals with contemporary and emerging issues. This would not be possible without the authors and the reviewers, and we would like to thank everyone who at some point over the last year has either submitted or reviewed an article – you are the lifeblood of the journal; we continue to rely on your involvement at every level of the publication process, and would like to pass on our appreciation.

Pete Fitzgerald, Katy Dillon, and Kimberley Marwood, Executive Editors

The History of Intersexuality: The Emergence and Control of Intersexuality in Medical Discourse

Matthew Bennett

Abstract

Many writers have looked upon instances of intersexual births as problems for the binary model that they have identified in western understanding of sex and gender. This paper challenges that interpretation of intersexuality, recognising the place of the concept in an exclusivist taxonomy contrived by those medical professionals that inaugurated the term "intersexual". The birth of the treatment of "intersexuality" was a culmination of a century long conceptual movement that eradicated the "true hermaphrodites" of the pre-medical era and interpreted such anatomies as ambiguous problems to be solved and corrected with infant surgical intervention. This paper will trace the emergence of the concept of intersexuality and the usurpation of human double-sexed hermaphroditic biology and suggest that the political agendas of those aforementioned writers would be best realised by revival of the possibility of the "true hermaphrodite" and a subsequent objection to the normalising surgery of paediatricians of intersexuality.

Do we *truly* need a *true* sex? With a persistence that borders on stubbornness, modern Western societies have answered in the affirmative. They have obstinately brought into play this question of a "true sex" in an order of things where one might have imagined that all that counted was the reality of the body. (Foucault 1980, vii)

The status of being intersexed that I refer to as "intersexuality"[1] is described by the Intersex Society of North America (ISNA) as 'a reproductive or sexual anatomy that doesn't seem to fit the typical definitions of female or male' (see 'What is intersex?', The ISNA webpage). Intersexuality has by some writers been seen as 'quite literally queer or "culturally unintelligible"' (Preves 2002, 523) and thus intersexual individuals heralded as 'exceptions in a world where most people are "biologically normal"' (Kessler 1985, 23). The aim of this paper is to trace the emergence of intersexuality in Western medical discourse and investigate how, under the scrutiny of 'medical men of the nineteenth century' (Dreger 1998, 54), it was used not as a term that transgressed the categories of the medical profession, but in control of those hermaphroditic physiologies that had preceded intersexuality in the form of 'the human monster' (Foucault 1997, 51). I argue that the revival of the

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[1] The term "intersexuality" is used by few authors on the subject of intersexed bodies, presumably in an attempt to avoid confusing biological sex with sexual orientation. I should make it clear that my use of the term does not intend to imply a necessary connection between the physiology of intersex people and their sexual orientation.

possibility of "true hermaphroditism", by means of objecting to normalising surgery, would be a more appropriate way of subverting 'a binary notion of gender' (Hird and Germon 2001, 172) riters such as Sharon Preves have seen the existence of intersexuality as problematic for the 'overarching and largely unexamined social expectation that all humans belong to one of two clearly delineated sex categories, female or male' (Preves 2002, 523). In the discourse prevalent not only in medical treatment of intersexuality but broader cultural perspectives of "sexual ambiguity", commentators have perceived 'a binary notion of gender' that is said to be '*the* necessary code' (Hird and Germon 2001, 172). It is thought that the intersexual body, in being 'sexually ambiguous', challenges 'prevailing understandings of sex' as a mutually exclusive binary (Preves 2002, 523). To highlight the naivety of such attitudes towards intersexuality and what its ramifications are for the sexual status quo, I wish to expose the origins of the term "intersex" as it is understood in the literature of gender theory and medicine.

The source of the term "intersex" is difficult to determine; whilst Hird and Germon trace it to 1920 (Hird and Germon 2001, 175 n.1), Alice Dreger (Dreger 1998, 31) writes that 'Richard Goldschmidt was the first biomedical researcher to use the term "intersexuality"' in his 1917 paper 'Intersexuality and the endocrine Aspect of Sex', and was responsible for initiating the growth of the term's usage in the biomedical profession. However, antecedent to the study of 'sexual ambiguities' (Dreger 1998, 31) is a history of medical expertise that stretches far beyond intersexuality into the documentation of hermaphroditism. According to Foucault, hermaphrodites 'who occasioned…problems in the seventeenth and eighteenth centuries' were preceded by the 'half human, half-animal being' of the Middle Ages and the 'double individualities' of the Renaissance (Foucault 1997, 51). During these pre-medical eras the anatomically ambiguous individual was instead conceived vis-a-vis a hermaphroditic duality that originated nearly two millennia before its incorporation into the broader "intersex". This "double individuality" can be traced to Ovid's *Metamorphoses* when Hermaphroditus, who 'in his face showed father and mother and took his name from both' (Ovid 1998, 83), was bound inseparably to the lustful Salmacis:

…both bodies merged
In one, both blended in one form and face. (*Ibid.* 85)

Hermaphroditus is a figure of perfect coalescence of both the male and female form, given the name that incorporates both father (Hermes) and mother (Aphrodite) who were 'themselves "the embodiments of ideal manhood and womanhood"' and thus fixing in 'the Western imagination the long-standing image of the hermaphrodite as a tragicomic, double-sexed creature' (Dreger 1998, 31). The duality of Hermaphroditus is echoed in the writings of, for example, John of Salisbury, who used the metaphor of the

hermaphrodite to refer to the 'double-natured position of a court philosopher' and his 'contradictory (hence "hermaphroditic") loyalties' (*Ibid.* 32). Whilst it must be noted, to avoid romanticising pre-medical perspectives on hermaphroditism, that antiquity and the Middle Ages held little sympathy for such "half humans" who 'were often put to death' (Epstein 1990, 107), the consistent attitude towards this precursor to the intersexual was a perception not of an ambiguous or problematic anatomy, but of the physiology of both man and woman 'blended in one form and face' (Ovid 1998, 85). Such an anatomy would constitute, if the phenomenon were to be understood as such in contemporary gender theory, a 'cultural unintelligibility' (Preves 2002, 523) that would transgress the mutually exclusive boundaries of the insistent 'binary notion of gender' (Hird and Germon 2001, 172) that the aforementioned writers have identified. The belief that the human body belongs to 'one of two clearly delineated sex categories' would be subversively contradicted by any notion of a human body possessing both male and female anatomy (Preves 2002, 523).

This possibility of hermaphroditic duality began to dissipate with the introduction of 'gender assignment…based on the physician's expert declaration of the individual's *true* sex' (Hird and Germon 2001, 163. Italics in original). The 1830s witnessed Isidoire Geoffroy Saint-Hilaire's introduction of teratology (defined by *The American Heritage Steadman's Medical Dictionary* as 'the biological study of malformations and monstrosities'), a discipline that incorporated anomalous anatomies not as hermaphroditic "double individualities" but as 'variations from normal development' (Dreger 1998, 34). Problems for teratology emerged thereafter in the identification of which "normal" sex the hermaphroditic patient had "deviated" from. To use Susan Kessler's analogy, if 'it is a fact that someone is a man or woman, just as it is a fact that the result of a coin toss is either heads or tails' then teratology was based on that observation that 'the coin may be worn and we may have to inspect it very closely' (Kessler 1985, 1). One should note, however, that the new indeterminacy of hermaphroditism was not due to the wearing down of a historically existing coin; it came with the invention of that mutually exclusive binary which engendered the ambiguity of the anatomy of those "human monsters" whose identity had previously been unproblematic (see, for example, Dreger 1998. 55: 'the posthumously famed Italian hermaphrodite Maria Arsano spent her eighty-year life as a woman, never having been suspected of being otherwise').

The ostensible problem of identifying "true" sex was thought to be solved by the concurrent system of James Young Simpson, whose fundamental demarcation consisted of the bifurcation of hermaphroditism into the 'spurious and true':

The spurious comprehending such malformations of the genital organs of one sex as make these organs *approximate in appearance* and form to those of the opposite sexual type…true hermaphroditism including under it all cases

in which there is an *actual mixture or blending together*…[of] both the male and female organs (Simpson in Dreger 1998, 143. Italics in original)

The increased specification of the criteria for "true hermaphroditism" was thenceforth to be the model for theorising what was now seen as genital *ambiguity*. Moreover, identification of "true hermaphroditism" enabled the search for those "spurious" individuals who masqueraded as hermaphroditic and concealed their "true" status as male or female. Thus the medical profession at the end of the nineteenth century, continuing Simpson's paradigmatic taxonomy, created a tripartite classification scheme using the labels of Lawson Tait's *Disease in Women*: true hermaphrodite, male pseudo-hermaphrodite and female pseudo-hermaphrodite (Tait 1879).

It was at this point that the eradication of the hermaphrodite began. The dual aspect of hermaphroditism, evident in its understanding before the "medical men", was reinterpreted in the mid nineteenth century as 'a would-be male or female [i.e. pseudo-hermaphrodite] gone wrong in the womb' (Dreger 1998, 34). This was followed by late Victorian taxonomy that allowed the likes of Blacker and Lawrence (1896) to 'clean the historical record of any alleged cases of true hermaphroditism' (Dreger 1998, 146), rereading the history of "double individuality" as, mostly, a case of mistaken identity. Their work also insisted that new gonadal and histological (tissue-based) criteria for sex identity meant 'the necessity of a *microscopical examination*' (Blacker and Lawrence in Dreger 1998, 147. Italics in original), an amplification of the technicality of anatomical classification handing the authority over individual sex to the "expert". Why was it felt necessary to eliminate the hermaphrodite and "reveal" the "true" sex of the individual? Dreger suggests that 'it cannot be a coincidence that at the same time other historians find the emergence of the homosexual, I find the virtual extinction of the hermaphrodite' (Dreger 1998, 153) whilst Epstein reminds us of the Victorian 'centrally organising concern to bar same sex alliance' (Epstein 1990, 101). The implication is the influence of homophobia on a classification system that fathered contemporary biomedical theories of intersexuality.

Progression of the pathologisation of hermaphroditism followed from this point for almost a hundred years through the repeated introduction and subsequent usurpation of new biomedical scientific paradigms, each with their own increasingly specified measure of "true hermaphroditism". In 1911, Samuel Pozzi's refined nomenclature announced that 'even so-called true hermaphrodites with ovotestes [the gonadal measure of true hermaphroditism] were not really true hermaphrodites' in virtue of the fact that 'only the ovarian portion of the ovotestes functioned' (Dreger 1998, 155). Three years later, David Berry Hart insisted that the term "hermaphrodite" be removed from medical lexicon (Hart 1914) and another three years later Richard Goldschmidt made, according to Dreger, the first use of the term "intersexual" (Dreger 1998, 31).

Thus the emergence of the intersexual was not the appearance of bodies that 'do not conform…to one of two clearly delineated sex categories' (Preves 2002, 523). Nor is it true that 'intersexuals have been erased historically by the enforced *choice* of one gender or the other' (Hird and Germon 2001, 164). Quite the contrary; in their failure to recognise the historical distinction between the pre-medical hermaphrodite and the intersexual (a term incorporating and perpetuating that Victorian tripartite taxonomy of "anatomical ambiguity") writers such as Hird and Germon confuse a classification system introduced to eradicate the nonconformist body of the hermaphrodite with that nonconformist anatomy. Intersexuality, rather than exemplifying a transgressing physiology, was a result of the final elimination of the possibility of transgressing hermaphroditic biology.

The completion of the transition from the hermaphrodite to the intersexual was followed in the twentieth century by treatment of intersexuality based primarily on the work of John Money. Money's theory, first co-authored in 1955 (Money, Hampson and Hampson 1955) and developed in 1972 with the help of Anke A.Ehrhardt, (Money and Ehrhardt 1972) maintained that 'gender identity is changeable until approximately eighteen months of age' and thus recommended that 'the genitals must be made to match the assigned gender as soon as possible' after birth (Kessler 1990, 6-7). As a consequence of this development, anatomical ambiguity moved to the realm of paediatrics, where it remains today. The British Association of Paediatric Surgeons, for instance, produced a paper in 2001 on the 'Surgical Management of Children Born with Ambiguous Genitalia' stating that 'standard protocols have stressed the need for early diagnosis, gender assignment and appropriate surgery in infancy' (Rangecroft, Laurence et al. 2001). The ISNA now refer to intersex not as the status of an individual but as 'a variety of conditions in which a person is *born* with a reproductive or sexual anatomy that doesn't seem to fit the typical definitions of female or male' ('What is intersex?', ISNA webpage, italics added). Intersexuality in the twenty-first century is used as an umbrella term that incorporates a variety of 'disorders of sex differentiation' (Fugita and Denes 2001, 635) that the "medical men" of today agree must be rectified during infancy. These include Androgen Insensitivity Syndrome (AIS), Congenital Adrenal Hyperplasia (CAH) and Klinefelter's syndrome.

Still prevalent in biomedical practice, however, is the identification of male and female pseudo-hermaphroditism, now described by the online General Practice notebook as 'the situation in which an individual has ["true"] male chromosomal and gonadal gender but with *apparently* female external genitalia' ('Male pseudohermaphroditism', General Practice Notebook webpage, italics added) or 'there is ["true"] female chromosomal and gonadal gender associated with *apparently* male external genitalia' (*Ibid.* 'Female pseudohermaphroditism', italics added). The Victorian insistence in identifying the "true" sex pervades the polysemy of intersexuality; CAH, for example, is said to have a 'particularly strong influence in "masculinising"

["true"] females' whilst Klinefelter's syndrome is described as 'a congenital condition…[which] arises when the standard 46XY chromosome pattern of a *male* human is interrupted' (Stretton-Cox 2004. Italics added). Androgen Insensitivity Syndrome is said to occur when 'a person who is genetically male (has one X and one Y chromosome) is resistant to male hormones called androgens' (Hurd 2006), the hormones responsible for the development of male physicality. Consequently the AIS individual develops 'some or all of the physical characteristics of a woman, *despite* having the genetic makeup of a man' and the "true" male foetus undergoes "abnormal" growth into an adult who 'appears to be female' (*Ibid.* italics added). Thus the ostensibly archaic "male or female gone wrong" view of the Victorian embryologists is not as outdated as intersexuality support groups have hoped it would become.

The multifarious means of diagnosis in twentieth century treatment of intersexuality have led to a state of affairs wherein intersex infants now draw the attention of not just one area of expertise but a variety of biomedical professionals utilising techniques in ultrasound, karyotyping (chromosome analysis), biopsy of reproductive tissue and blood tests so that 'a correct diagnosis and determination of sex can be made' (Turkington 2002). However, the medical profession continues to employ new ways of uncovering the truth of the individual's sex. Developments in neurology, as Anne Fausto-Sterling observed, meant that 'in the late twentieth century, many biologists have shifted their attention to the brain' so that 'the brain then gets to define the man or woman' (Fausto-Sterling 1992, 224). Appearing on the BBC Horizons program 'Is it a Boy or a Girl?', Professor Richard Swaab claimed to have discovered a 'sexually dimorphic nucleus' and concluded from this 'that our ["true"?] sex difference is present already very early in developments' ('The Boy Who Turned into a Girl' 2000).

Neurologists share authority with, among other disciplines, genetics, the realm of sexual biology on which Germaine Greer bases her erroneous understanding of intersexed persons. If ever an explicit case of the dangerous influence of the "true sex gone wrong" ideology were needed, one should look no further than Greer's offensive comments about AIS in *The Whole Woman*, to which the AISSG (Androgen Insensitivity Syndrome Support Group) took marked exception[2] Greer's insistence on the exclusive "truth" of the 'XX female' lead to the following comment, referring to the case of an AIS individual:

…she was not a woman but a failed male who may pass for a female and even marry her long-term boyfriend because she was wrongly identified at birth as a female. AIS 'females' have no female organs and not a female cell in their bodies. (Greer 2000, 88)

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[2] Details of the objections can be found in 'Debates/discussions' at the AISSG website.

Articulating the ideology behind a medical practice that sees AIS as an abnormal foetal development, Greer's misguided interpretation of the AIS individual as 'a failed male' exposes the philosophy behind intersexuality as an exclusivity of sexual categories that verges on the criminally discriminatory.

The ISNA is very explicit in its aims, recommendations and agenda. Amongst these, they insist that 'parental distress should not be treated with "normalising" surgery on children' ('What does ISNA recommend for children with intersex?', ISNA webpage). Supporting this principle and following from the preceding discussion of the origins of intersexuality and its modern medical treatment, I argue that those individuals who share the experience of being 'born with an anatomy that someone decided is not standard for male or female' (ISNA homepage) undergo a processing of the body whereby the determination of their "true" sex is based on a medico-scientific tradition that began when the "hermaphrodite", with the very real possibility of "double individuality", was usurped by an ever-narrowing definition and increasing impossibility of the "true hermaphrodite". The "true hermaphrodite" is nowadays said to account 'for fewer than five per cent of all cases of ambiguous genitalia' (Kessler 1990, 5). Thus ninety-five percent of intersex births have their "true" sex determined by the experts and their pseudo-hermaphroditism revealed. The vast numbers of infants undergoing John Money's recommended corrective surgery (according to David Hester one in every thousand births (2004, 217)) are thus the culmination of a history of medicine that has aimed to diminish the number and ultimately eliminate the existence of bodies that display the possibility of more than one sexuality.

The frequency of infants diagnosed with intersex conditions does not, as Hester and others have argued, produce 'awareness of the multiplicity of factors that results in a plurality of sex categories' (Hester 2004, 215), but instead illuminates the efficiency with which the modern medico-scientific diagnosis of intersexuality has "revealed" the "true" sex hidden by anatomical "ambiguity". The development has allowed those "medical men" that owe their origins to the illiberal impositions of eighteenth century teratology to "correct" the "congenital disorders" of an ever-increasing percentage of *pseudo*-hermaphrodites captured under the pathology of intersexuality.

If this paper indicates the existence of any historical factor that can upset the mutual exclusivity of the "binary notion of gender", it is the duality of the pre-medical hermaphrodite and its unproblematic subsistence before its reduction to "true" gender and its subsequent "correction" at the hands of the paediatric surgeon. Rather than appealing to the existence of the problematic *intersexual* body, which can be subsumed into the pathologisation of "ambiguous anatomy", I believe that dismantling the mutually exclusive binary framework of sexual identity and freeing up anatomical possibilities lies in supporting intersexual support groups' demands for the termination of a medical practice whose knife intervenes in

infancy. On a theoretical level, this requires an emphasis on the revival of the possibility of biological duality in the "uncorrected" *true* hermaphroditic body as it was conceived before its pathologisation.

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Four versions of Xanadu

Catherine Roberts

The following four poems are Oulipian. Oulipo (Ouvroir de Littérature Potentialle – roughly translated to Workshop of Potential Literature) was founded in Paris by Raymond Queneau and, since the 1960s, has evolved into a genre of writing based on what the founding members referred to as 'constraints'.

I began with the intention of writing an Oulipian favourite: a tautogram. The *Oulipo Compendium* defines a tautogram as: "A text whose words, or at least the principle ones, all begin with the same letter."[3] The original 'Xanadu' is a tautogram, but an irregular one. There are twenty-six lines to the poem, each corresponding with a letter in the alphabet. A hard constraint would be, for example, the rule that every single word on the 'Z' line would have to begin with said letter. However, I chose to go for the softer constraint of making sure that each line had a sense of the letter it had adopted.

The idea of retelling things is central to Oulipo. Therefore, I translated my original poem antonymically and using N+7. The antonymic translation swaps almost every word for its antonym (a word opposite in meaning). N+7 is a method invented by Jean Lescure and its mathematical roots endear it to writers of Oulipo. Using it, I replaced each noun with the seventh following it in the dictionary.

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[3]   Harry Mathews & Alastair Brotchie, *Oulipo Compendium* (London: Atlas Press, 2005), p. 231

Xanadu

The place of zinc-rich earth and zealous zephyrs,
where we yawped and swam alongside our yellow-bellied yawl
and played on xylophones with ex-witches,
weaving weird, waltzing tapestries of sound.

The place where violets engaged in violence
and unnamed urns smashed uselessly
against turning tides
and serious seas.

The place which rustled with rubies,
quietly quirky.
It pleased princesses, do you remember?
Women from Oslo, the Orient and Oz.

But there was no night sky; we never napped.
It might have driven most mad
but we loved it like we might lose it and
kept it, kept it.

The place of jingling jasmine trellises,
where I insisted on inking an idea
along the hollow, holy husk
of a gnarled gooseberry bush.

The place where food was forever fabulous
and the eve of ecstasy was ever near.
You ducked into a dancer's dwelling
and came out on the cusp of the coast,

braced on the storm-breeze like a boat
that ached for ages passed.

Xanadu: antonymic translation

The place of zinc-deficient skies and dispassionate zephyrs,
where they sighed and sank beneath their brave bomber
and cultured quiet without magic,
unravelling irreverent, still, blank pages of silence.

The place where oaks engaged in apathy
and baptised urns were effectively restored,
away from immutable tides
and carefree skies.

The place that lacked pebbles,
rambunctiously conventional.
It disturbed princes; he forgets
men from Tacoma, Quito and Cóbh.

But there was no daytime sea; they were perpetually napping.
It would've kept most sane,
but they hated it like they might find it and
lost it, lost it.

The place of crashing lichen trellises,
where you reluctantly erased an abstraction
along the infested, irreverent husk
of an unswerving gooseberry bush.

The place where food was forever underwhelming
and the end of pain was ever far.
I leapt out of a dancer's wilderness
and landed in the heart of the plains,

unsupported by the calm like a boat
undesiring of the future.

Xanadu: antonymic translation, plus N+7

The placement of zing-deficient skydiving and dispassionate zest,
where they sighed and sank beneath their brave bona fides
and cultured quillwort without a magic lantern,
unravelling irreverent, still, blank page-turners of silica.

The placement where oarsmen engaged in aperitifs
and baptised Ursulines were effectively restored,
away from immutable tideways
and carefree skydiving.

The placement that lacked pecks,
rambunctiously conventional.
It disturbed the Prince of Wales; he forgets
mangroves from Tacoma, Quito and Cóbh.

But there was no D-Day; they were perpetually napping.
It would've kept most sane,
but they hated it like they might find it and
lost it, lost it.

The placement of crashing lidocaine tremors,
where you reluctantly erased an abutter
along the infested, irreverent hustings
of an unswerving goosegrass bushfire.

The placement where a fool was forever underwhelming
and the ending was ever far.
I leapt out of a dandelion's wilding
and landed in the hearth of a Plains Indian,

unsupported by the calorimeter like a boatie
undesiring of the futurity race.

Xanadu: original poem, plus N+7

The placement of zing-rich earthquakes and zealous zest,
where we yawped and swam alongside our yellow-bellied yearling
and played on yachtsmen with ex-witchetties,
weaving weird, waltzing tapotements of soundchecks.

The placement where vipers engaged in vipassana
and unnamed Ursulines smashed uselessly
against turning tideways
and serious skydiving.

The placement which rustled with ruckles,
quietly quirky.
It pleased printers, do you remember?
Wombats from Oslo, the Orient and Oz.

But there was no nightdress skydiving; we never napped.
It might have driven most mad,
but we loved it like we might lose it and
kept it, kept it.

The placement of jingling jaunting-car tremors,
where I insisted on inking an idée fixe
along the hollow, holy hustings
of a gnarled goosegrass bushfire.

The placement where a fool was forever fabulous
and the evening star of ectotherm was ever near.
You ducked into a dandelion's dyeline
and came out on the custodian of the coat dress,

braced on the brent goose like a boatie
that ached for agent generals passed.

The 'Fingerprint' of Vox Pop Interviews

Ariel Vazquez

ABSTRACT

The present study is framed within the methodological basis of Conversation Analysis (CA), and it is focused on institutional talk. By means of comparing and contrasting the vox pop interview with other institutional interactions, the paper exposes the institutional and interactional features of the vox pop interview with the purpose of defining the 'fingerprint' of this kind of interaction. For the aim of this paper, twenty vox pop interviews were taken from the Mexican news broadcast called *El Notifiero*, available online. A total of ten vox pop interviews were selected to be analysed and transcribed using the transcription conventions of CA. The analysis of the data revealed three possible ways in which the interviewer (IR) may react to the answer of the respondent (RT); these are: nodding, making an assessment, and reformulating. It also showed that the IR may shape the interaction in order to elicit talk from the RT, and that the IR could, in some cases, build an argument just like a lawyer would in a courtroom.

1. Conversation Analysis and Institutional Talk

Let us start by placing Conversation Analysis (CA henceforth) studies in the wide scope of the Social Sciences research so as to provide a top-down notion of where institutional talk analysis is situated. It might be argued that the Social Sciences can be regarded as a complex set of 'matryoshka dolls'[4] that contains a vast variety of sciences on which research is carried out in order to describe and explain aspects related to humans in interaction or as individuals. The complexity of this 'matryoshka doll' relies on the interdisciplinary characteristic of its sciences; for instance, we may encounter CA not only inside the 'Linguistic doll' but it could also be inside the 'Sociology doll'. Similarly, research on CA shares its contents with Pragmatics and/or Sociolinguistics; however, their aim and object of study are particularly defined in each of these fields. With regard to CA, and following this matryoskative analogy, we may consider talk-in-interaction as its main object of study, which involves both 'ordinary conversation' and 'institutional talk'; the latter placed inside the former; and the relationship between the two of them could "be understood as that between a 'master institution' and its more restricted local variant" (Heritage, 1998: 2). Therefore, the institutional talk analysis will depart from the restrictive differences maintained with 'ordinary conversation' but it will remain permanently similar in the principles of context construction and ordered actions.

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[4] This is a Russian ornament that consists of a set of decreasing sizes dolls which are located one inside another. It is important to mention that this analogy does not imply any kind of hierarchy of size or importance among disciplines, but the interrelationship among them.

The 'restricted local variant' of ordinary conversation (i.e. institutional talk) is the type of talk-in-interaction present when people carry out their daily working activities pursuing a specific task in professional settings; for instance, interactions that occur in courtrooms, doctor consultations, classrooms, news interviews, etc. As Drew and Heritage (1992b: 22) remark, institutional talk involves: (a) an orientation towards a specific goal, task or identity at least by one of the participants; (b) constraints on the participants' contribution to the talk and (c) specific inferential frameworks and procedures for each institutional context.

Let us now use news interviews as an example which contains these three characteristics of institutional talk. Firstly, news interviews are a restrictive variant of ordinary conversations because "pre-allocated turns" (Atkinson and Drew, 1979: 37) are assigned to the participants, in this case the interviewer (IR henceforth) and the interviewee (IE hereafter), according to their respective institutional roles. One of the interesting and analysable parts of this event is that different actions can be performed within the frame or form of a question or an answer during the interaction between the IR and the IE. With regard to the task of news interviews, we may argue that since this type of institutional talk is designed for an audience, the participants have the task of constructing information through questioning and answering so that the audience can build an opinion or a thought about the participants and/or interview topic(s). Secondly, in relation to the constraints of the participants' contributions to the talk, we may mention that the formality[5] of news interviews relies not only on the restrictive turn-taking system but also on the limitations that the IR and the IE have while interacting. In other words, the IR's and IE's contributions are meant to be questions or answers respectively; however, as mentioned before, institutional talk is governed by the principle of context construction which means that in the analysis of news interviews one can find that such limitations are 'violated' and that the interaction may move, for example, from the formal context of news interviews to a confrontational context. Finally, their specific inferential frameworks and procedures are related to two things, on the one hand they have to do with the restrictive character of institutional talk and the participants' roles; and on the other, they are linked to what Levinson (1992: 97) calls "activity-specific rules of inference".[6] For example, in order to show neutrality during news interviews and therefore be perceived as 'professional', the IR might withhold expressing sympathy or agreement with the IE's ideas or claims.

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[5] In Atkinson's (1982) paper on 'formality', news interviews are categorised as a 'formal' interaction; and it is argued as well that formality is identified by its differences with ordinary conversation.

[6] These activity-specific rules constrain two things: "what will count as an allowable contribution" to the talk and "what kind of inferences will be made from what is said" (Levinson, 1992: 97).

So far, a brief description of institutional talk has been provided; it has also been mentioned where institutional talk is situated within CA along with where the departure point of institutional talk analysis is located; and the general characteristics of institutional talk in terms of news interview have been presented. Now having this general notion of institutional talk let us move to the main objective of this paper which is focused on one type of interview: vox pop interviews (VPIs hereafter). In the following pages we first analyse the features that make vox pop interviews institutional talk, then we examine the characteristics and the features that they share with other types of institutional talk. The data analysed here is taken from VPIs carried out by the journalist Caridad Cienfuegos whose VPIs are presented in a Mexican news broadcast called *El Notifiero.*[7]

In order to start dealing with this matter it is important to stress two factors about the institutional talk analysis approach. Firstly, it has to be taken into account that the participants overwhelmingly use the turn-taking system to show and perform the "institutional character" (Drew and Heritage, 1992: 26) of a given institutional talk. This is precisely how the dissimilarities between ordinary conversation and institutional talk arise. Secondly, these divergences are linked to both the restrictions of the actions that can be made during a conversation and to the development and negotiation of the actions which are not restricted in a given institutional interaction. Both factors may result in the variation of the characteristics of the different institutional interactions as argued by Heritage and Greatbatch (1991: 95-96):

"The ensemble of these variations from conversational practice may contribute to a unique 'fingerprint' for each institutional form of interaction – the 'fingerprint' being comprised of a set of interactional practices differentiating each form both from other institutional forms and from the baseline of mundane conversational interaction itself".

In the following section it is proposed a view of what may be called the 'fingerprint' of VPIs.

2. The 'Fingerprint' of Vox Pop Interviews

Vox pop interviews take place in public spaces and, one may say, are a sort of compilation of 'brief interviews' because the time spent with each individual (interviewee) lasts between eighty and ninety seconds. They consist of a journalist asking randomly selected people the same question(s) so that the variety of responses build an idea about the different opinions within the population in regard to a specific topic (Hüllen, n.d.). They do not embody

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[7] This TV programme can be described as a satire on news programmes. Here the presenter is dressed as a clown and he comments on the most relevant news of the week. As part of the programme, there are several vox pops in regard to political and social matters. Caridad Cienfuegos is one of the interviewers responsible for the VPIs.

a formal opinion poll that may be taken as a representation of the general view of an entire population; they are rather perceived as a reflection of the range of people's beliefs and judgments about the topic. These types of 'brief interviews' are used in radio and/or TV programmes where they may be broadcast alone or as part of a report, news interview or any media element.

From the definition of VPIs, we notice that they are a task-oriented talk-in-interaction in the sense that, similarly to the standardised survey interview[8], the interaction between the IR and the respondent (RT henceforth) is intended to collect people's opinions with regard to a matter of popular interest, but in this case they are compiled to be presented to the audience of a TV or radio programme. VPIs could be considered to be goal-oriented interactions because the IR's principal task is to elicit talk from the RTs and in this way obtain their view about a topic. Similar to news interviews the accomplishment of VPIs is accompanied by restrictions present in the interaction, such as the fact that the issues treated are pre-established and stipulated by the IRs, and the turn-taking system is overwhelmingly constrained by a question and answer format. From the data analysed in this study, it is noticed that the organisation of the interaction within VPIs could be described in terms of CA as follows.

2.1 Adjacency Pair

An adjacency pair is an ordered sequence of actions/utterances that are recognised in a talk-in-interaction (Sacks, 1992); they have an order because although both actions come together, one precedes the other. That is, a specific first part of the pair has a specific second part; for example, an accusation may be followed by an acceptance or a denial. Echoing Schegloff and Sacks' words, we describe how adjacency pairs work in VPIs as: "given the recognizable production of a first pair part, [a question,]… its speaker [the IR] should stop and next speaker [the RT] should start and produce a second pair part from the pair type the first is recognisably a member of" (1973: 296). It could be argued that VPIs are constructed only by question-answer adjacency pairs; however, as Heritage (1984: 257) remarks a "third turn option" may accompany an adjacency pair. Houtkoop-Steenstra (2000: 24) explains that a question-answer adjacency pair is an "action structure built of sequence positions". She represents it like this:

> Turn 1 position: Speaker 1: question
> Turn 2 position: Speaker 2: answer

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[8] This is a data collection instrument used in social science research; it is designed "for gathering data with which to measure the intentions, actions, and attitudes of large numbers of people, usually representative samples of the populations being studied" (Houtkoop-Steenstra, 2000: 1). We will be referring to the standardised survey interview which is presented as type of institutional talk in the book *Interaction and the Standardized Survey Interview* by Houtkoop-Steenstra (2000), her book's main arguments are that "detailed conversation analytic study of actual survey interaction may provide insights for the improvement of questionnaire design in general" and that CA "may also be used as a diagnostic instrument for specific questionnaires" (p.14).

Turn 3 position: Speaker 1: receipt of response

In the data of VPIs used, three different forms in which Speaker 1 (the IR) receives the response of Speaker 2 (the RT) were found: the IR does it using assessment tokens, reformulating the RTs' answer, and nodding. In the following section it is first analysed and illustrated with samples the different receipt actions, then it is exemplified how the third turn can be used to elicit the RTs' talk.

2.2 Receipt Actions
2.2.1 Nodding
As has been mentioned, the main objective of an IR doing VPIs is to elicit the RT's opinions, or in other words, the RT's talk; in order to achieve this purpose the IR should facilitate and encourage the RT's freedom and comfort to talk. One way to do so is by nodding. In Schegloff's paper, it is argued that the action of nodding at someone while s/he is talking does not only indicate that the recipient of the talk is understanding, paying attention and showing interest, but also his/her nods are regarded as the action of "passing the opportunity to do a full turn at talk" (1982: 88). In our data it is found that the IR overwhelmingly nods while she listens to the RT's responses. This is shown in extract (1). (Transcription symbols and translation conventions are explained in the Appendices A and B respectively)

(1)   [*Caridad Cienfuegos y las manifestaciones*[9] (3:15)]

(1)   [*Caridad Cienfuegos y las manifestaciones*[10] (3:15)]

```
1     IR:    ¿qué opina usted de las manifestaciones?
2            what opine (PRES) you (SG DIST) of the demonstration? [IND]
3            What do you think about demonstrations?
4     RT:    .hh (.3) mira: (.8) °eh° (.9) eeh no tengo inconveniente con las manifestaciones
5            .hh look (PRES) eh eeh no have (PRES) problem with the demonstrations [IND]
6            .hh (.3) look (.8) °eh° (.9) eeh I don't have any problem with demonstrations
7        →   (.3)
8     IR:→   ((nodding + - spd))
9     RT:    simplemente: el derecho ah (.) ah (.) a la libertad de nosotros también no? dep_
10           simply the right ah ah to the liberty of us too
11           just that ah (.) ah (.) we also have the right to freedom don't we?
11       →   (.5)
12    IR:→   ((nodding + - spd))
13    RT:    vaya (.) obstruyen tráfico
14           go (PRES) [EXCL] block (PRES) the traffic [IND]
15           you know (.) they block the traffic
16           (.)
17    IR:→   ((nodding + - spd))
18    RT:    obstruye:n (.3) gente
19           block (PRES) people [IND]
20           they block people
21       →   (.3)
22    IR:→   ((nodding + - spd))
```

[9] Available at http://uk.youtube.com/watch?v=_-Hrpk6TIoU
[10] Available at http://uk.youtube.com/watch?v=_-Hrpk6TIoU

```
23    RT     obstruyen pasos
24           block (PRES) roads [IND]
25           they block roads
26      →    (.5)
27    IR:→   ((nodding + - spd))
28    RT:    yy yo: creo que no se vale
29           and I: think (PRES) [VERB IND] that no worth (PRES REFLEX) [EXP]
30           and I think it's not fair
31    IR:→   ((nodding + - spd))
```

Here, a pattern can be identified in the talk: every time the RT completes a statement, which could be considered as a transitional relevance place (TRP hereafter)[11] and which is also followed by a pause, the IR's nodding is present; the nods are characterised by the increase and then decrease of speed ('+ - spd') that can be regarded as hints. So, these actions suggest that when the IR nods the RT perceives attention, understanding and interest and this encourages him to expand his opinion; the pauses the RT makes could be considered as the very moment when the IR gives hints to the RT so that he could expand his talk.

2.2.2 Assessment
Similar to the Standardised Survey interviews, in VPIs the IR should not judge or evaluate the RT"s answers; instead, the IR should be displayed as a mere collector of information or, in this case, opinions. Furthermore, one may think that if the IR assesses the given answers, the RTs may feel reluctant to express their thoughts and continue participating in the interview. However, in the data was found that something rather different happens.

In extract (2) the vox pop is about a statue of the former Mexican president (Vicente Fox) which was pulled down by some protestants on the very same day of its inauguration; so the question is 'of whom would you like to build a statue?'

(2)   [*Caridad Cienfuegos y la estatua de Fox¹²* (2:13)]

```
1    RT:    a ti:
2           of you:
3           of you:
4    IR:→   hay: qué lindo papi (.) ia quien nunca_=eso se merece un beso
5           oh [EXCL] what cute dady (.) and of whom=that deserve (PRESS) a kiss [IND]
6           oh how cute honey (.) and of whom never_=you deserve a kiss for this
5      →    (IR kisses RT)
```

In abstract (3) the vox pop is about AIDS, the IR asks the RT the following question: 'if your husband were coming back from a long trip would you ask him to wear a condom?'

(3)   [*Caridad Cienfuegos en Jalisco¹³* (3:28)]

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[11] TRP is the moment when a turn in a conversation is reached so "there is the possibility for legitimate transition between speakers" (Hutchby and Wooffitt, 1998: 48).

[12] Available at http://uk.youtube.com/watch?v=9Q4msrjv7Oo

```
1    RT:    ah por supuesto=porque quién sabe con quiénn tanto se habrá enredado
2           por allá mientras mi ausencia ¿no?
3           ah of course because who know (PRES) with whom so much involve [VERB IND]
4           there while my absence ¿no?
5           oh of course=because who knows how many people he could have fooled around with
6           (1) ((pause from the editing))
7           bueno que (.) mejor lo usamos ¿no? (.) porque quién sabe qué yo haya
8           hecho ¿no? (.5) hahh ¿n(hh)o?
9           well that (.) better it we use (PRES) no? (.) because who know (PRES) [IND]
10          what I have (AUX) [SUBJ] do (PERF) no? (.5) hahh n(hh)?
11          well (.) we better use it don't you think? (.) because who knows
12          what I could have done right? (.5) hahh right hhh?
13   IR:→   [eso] (.) también hhh ((she nods vigorously))
14          [that [EXCL] (.) as well hhh
15          [that's right (.) as well ((she nods vigorously))
16   RT:    [hahh…
```

As can bee seen in abstracts (2) and (3), lines 4 and 13 respectively, the IR assesses the RT's answer but she does it in two different ways. In (3) the IR evaluates the answer as correct and also agrees with the response by nodding; in (2) the answer is even responded with a kiss by the IR. As we said before, context construction is a principle in CA, and here there is an example of how the talk-in-interaction moves from a VPI's context to an ordinary conversational one. In order to understand these actions it is important to mention that the woman in charge of these particular VPIs is a character, and thus the VPIs can be considered to be 'informal', what is more the show itself where they are broadcast involves humour and satirical content. So, it could be said that the talk-in-interaction has a quasi-conversational character where the IR not only asks questions but also performs actions that resemble ordinary conversation: she manifests agreement in (3) and completes the second pair of a compliment adjacency pair in (2).

2.2.3 Formulation

Finally, the third way in which the receipt of an answer is manifested in the vox pops analysed here is formulation which is defined by Garfinkel and Sacks (1970: 350) as follows:

"A member may treat some part of the conversation as an occasion to describe that conversation, to explain it or characterize it, or explicate, or translate, or summarize, or furnish the gist for it or take note from its accordance with rules, or remark on its departure from rules…"

In the example below we notice that formulation is constructed by both, the IR and the RT, but elicited only by the former.

(4)   [*Caridad Cienfuegos y el ejercicio[14]* (2:20)]

```
1    RT:    pues eso es poco porque normalmente la barra pesa ciento ochenta kilos
2           EXCL that is less because normally the block weight (PRES) hundred eighty kilo [IND]
3           well that actually isn't much because normally the block weighs a
4           hundred and eighty kilos
5           (.5)
```

```
6    IR:→  y lo cargas todos los días?
7          and it carry (PRES) all the days? [IND]
8          and you carry it every day?
9          (.)
10   RT:   todos los días
11         all the days
12         every day
13   IR:   ciento ochenta kilos
14         hundred eighty kilos
15         a hundred and eighty kilos
16   RT:   ciento ochenta kilos (.) por barra
17         hundred eighty kilos (.) per block
18         a hundred and eighty kilos (.) per block
```

In line 6 the IR starts the formulation of the statement produced in line 1 and the RT continues it in line 16. It could be argued that since the aim of the IR is to elicit the RT's talk, she starts the formulation with questions so that the RT continues talking.

2.3 Eliciting talk

Here, we discuss the actions that the IR performs in order to elicit the RTs' talk. In the data analysed, Caridad Cienfuegos elicits the IRs' talk in two different ways: by introducing another question immediately after the RTs finish their answers and by pointing the microphone at the RTs.

(5)   [*Caridad Cienfuegos y Teotihuacán[15]* (1.51)]

```
1    IR:   Señora (.) ¿cómo está uste: =usted viene aquí por moda o por
2          convicción?
3          madam (.) how be (PRES) you (SG DIST) you (SG DIST) come (PRESS) for fashion
4          or for conviction [IND]
5          madam (.) how are you=do you come here out of fashion or out of
6          conviction
7    RT:   no: (.) por convicción = ((she nods))
8          no: (.) for conviction
9          out of (.) conviction
10   IR:→  =¿por qué?
11         =for what
12         =why?
```

In extract (5) we can notice that the IR does not only introduce the following question immediately after the RT has finished her answer, but also while the RT is talking, she nods as if to keep eliciting the RT's talk.

(6)   [*Caridad Cienfuegos del Notifiero[16]* (2:34)]

```
1    IR:   ¿cuáles son las cosas que te hacen ser feliz?
2          which be (PRES) the things that do (PRES REFLEX) happy
3          what are the things that make you happy?
4          ((IR points the microphone at the RT))
5    RT:   pues a mi esencialmente la música: (.3) la música y mi profesión (.) mi trabajo
6          well for me mainly the music (.3) the music and my profession (.) my job
7          well for me it's mainly the music (.3) the music and my profession (.) my job
8      →   (1)
9          que (.) este: el arbitraje que es este una de las cosas que más me gustan
```

```
10          that (.) er: the refereeing that be (PRES) er one of the thing that more like (PRES REFLEX) [IND]
12          that (.) er refereeing that is one of the things that I like the most
13    IR:   ((IR places the microphone at the RT)) ¿te va a hacer feliz cuando
14          saques una tarjeta o infeliz?
15          ((IR places the microphone at the RT)) go [PRESS REFLEX] be (PRES) [IND]
16          happy when take out (PRES) [SUBJ] a card or unhappy?
17          ((IR places the microphone at the RT)) is it going to
18          make you happy or unhappy when you take out a card?
```

In extract (6) the IR asks the question, line 1, then in line 5 the RT gives his answer but as he does, he pauses briefly, then in line 8 the RT stops talking and there is a one-second silence[17] which could be considered to be a TRP; however, the IR does not take the turn. We may infer that the reason why the IR does not talk is because she wants to continue eliciting the RT's talk. Evidence to support this claim is the fact that she keeps the microphone leaning towards the RT. In other words, the TRP is physically present.

So far it has been shown how VPIs are carried out; it has been analysed and exemplified the different ways in which the IR receives the RT's answers, and how the IR shapes the talk-in-interaction in order to elicit the RT's talk. All these characteristics constitute the fingerprint of vox pop interaction, they make vox pops a unique institutional talk but at the same time they cause them to be similar to other institutional interactions. In the final part of this work we comment on the similarities that exist between VPIs and other institutional talk.

3. Sharing Characteristics with Other 'Fingerprints'

Vox pop interviews, as presented in this paper, are closely related to standardised surveys and news interviews, in the sense that the three institutional talks are constrained by similar factors such as pre-allocated turns (e.g. question-answer format), IR and RT/IE institutional roles, and a pre-established agenda; however, the focus has not been yet on the fact that vox pops are interactions that are designed for an audience; they represent how one may judge or think of a specific matter. Taking this into consideration, vox pops can be compared with courtroom interaction. Let us demonstrate this claim in the following extracts.

(7)   [In Levinson (1992: 83)]

1   you aim that evening then was to go to the discotheque
2   Yes.
3   Presumably you had dressed up for that, had you?
4   Yes.
5   and you were wearing make-up?
6   Yes.
7   Eye-shadow?
8   yes.

---

[17] "When a speaker has completed his turn and the recipient does not take a response turn, causing a silence to occur, the speaker may analyze the silence as a cue to continue talking" (Houtkoop-Steenstra, 1999: 38).

9   Lipstick?

10   No I was not wearing lipstick.

11   You weren't wearing lipstick?

12   No.

13   Just eye-shadow, eye make up?

14   Yes.

15   And powder presumably?

16   Foundation cream, yes.

17   You had had bronchitis had you no?

18   Yes.

19   You have mentioned in the course of your evidence about wearing a coat?

20   Yes

21   It was not really a coat at all, was it?

22   Well, it is sort of a coat-dress and I bought it with trousers, as a trouser suit.

23   That is down there isn't it, the red one?

24   Yes.

25   If we call that a dress, if we call that a dress you had no coat on t all had you?

26   No.

27   And this is January. It was quite a cold night?

28   Yes it was cold actually.

Extract (7) is the cross-examination of a rape victim by the defendant's lawyer, according to Levinson (1992: 84) the aim of this question-answer interaction is to build up an argument for the jury. The argument would be as follows: "the victim was dressed to go dancing, she was heavily made up… and despite the fact that she had been ill, she was wearing no coat on the cold winter night. The implicit conclusion is that the girl was seeking sexual adventures". Now, let us observe the VPI that follows.

(8)   [*Caridad Cienfuegos y el ejercicio*[18] (2:40)]

```
1    IR:   ¿cuánto pesa cada garrafón?
2          how weight (PRES) each water bottle [IND]
3          how much does each water bottle weigh?
4    RT:   un promedio de veinte (.) litros(.) más o menos (.) es lo que pesa
5          an average of twenty (.) litres (.) more or less (.) be (PRES) it what weight [IND]
6          an average of twenty (.) litres (.) more or less (.) that is its weight
7    IR:   ¿y tú cargas estos garrafones hasta la casa de la gente?
8          and you (SG IF) this water bottles until house of the people?
9          and you carry all these water bottles to people's houses?
10   RT:   sí
11         yes
12         yes
13   IR:   ¿qué es lo más que te ha tocado subir de escaleras de alto?
14         what be (PRES) more that have (AUX) turn up the stairs high [IND]
15         what is the most storeys you have climbed in order to deliver a
16         water bottle?
```

---

[18] Available at http://uk.youtube.com/watch?v=HxI9sODboJw

```
17    RT:    lo más (.) diez pisos
18           the most (.) ten storeys
19           the most (.) has been ten storeys
20    IR:    ¿cargando esto?
21           carry (PRES) this? [IND]
22           carrying this?
23    RT:    Si
24           yes
25           yes
26    IR:    ¿y cuántos garrafones más o menos al día tú-tú: vas llevando?
27           and how water bottles more or less every day you-you go (PRES) take (PRES)[SUBJ]
28           and how many water bottles in average do you carry every day?
29    RT:    un promedio de entre cincuenta (.) cuarenta cincuenta (.) más o menos.
30           one average of between fifty (.) forty fifty (.) more or less
31           around fifty (.) forty fifty (.) more or less
```

Extract (8) is taken from a vox pop which is part of a report to discuss a newspaper article which claimed that in Mexico City people do not exercise; the aim of the vox pop is to build up the opposite idea. The argument of this specific extract for example would be like this: every day this man has to carry and deliver about fifty water bottles of twenty litres each, and sometimes he has to deliver the heavy bottles to houses which are on the tenth storey. The implicit conclusion would be that this man does exercise every day at work so he does not need to go to the gym. Comparing these extracts we notice that both institutional talks aim to construct an argument and present it to an audience in one case the jury and in the other the TV programme audience.

4. Conclusion

This paper has exposed that VPIs fulfil the necessary characteristics to be called institutional talk; in the data analysed, the principal characteristics that make vox pop interviews a restrictive variant of ordinary conversation were found, these are: pre-allocated turns, display of participants roles, and constraints in interaction. Furthermore, two goal-oriented actions performed by the IR were identified: to elicit the RT's talk and to build an argument.

The different types of institutional talk have their own characteristics but at the same time they all share some features; this fact allude to the matryoskative analogy presented at the beginning of this paper. In the sense that similar to news interviews, standardised survey interviews and courtroom interaction, VPIs are contained in the matryoshka doll of institutional talk. Moreover, VPIs reflect some of the features of the other institutional talks, and it is precisely this mixture of features which constitutes the 'fingerprint' of vox pop interviews.

Appendix A
Transcription Symbols

(1)	The number in parentheses indicates a pause in seconds.
(.2)	The number in parentheses indicates a pause in tenths of a second.
(.)	The dot in parentheses indicates a micro pause.
[ ]	Square brackets indicate the point at which overlapping starts and ends respectively.
=	The equals sign indicates latching between utterances.
.hh	It indicates inbreath.
hh, hahh	Both indicate laughter, 'hh' is a slight laugh and 'hahh' is considerable laugh.
wo(hh)rd	'hs' between words indicate laughter infiltrated in the speech.
wor-	It indicates that a words is cut off.
<u>wo</u>rd	underline fragments of a word indicate louder sounds.
¿word?	The two questions marks indicate that the talk is produced with questioning intonation at the beginning and end of the utterance (only in Spanish).
word?	In English, one question mark indicates question intonation.
[*Caridad Cienfuegos* (3:34)]	Extract headings refer to the transcript source, in all the extracts, except extract (7), the numbers in parenthesis indicate the minutes:seconds where the part referred can be found in the video.

Appendix B

The data used in this paper is in Mexican Spanish; therefore, the transcriptions are structure as follows: the first line(s) is (are) the utterance in Spanish, the second line(s) is (are) the literal translation, and the third line(s) is (are) the English equivalent which is in **bold**.

Translation abbreviation

EXCL	exclamation (e.g., **pues** eso es poco porque…/well, that isn't that much because…)
EXP	expression (e.g., **no se vale**…/it's not fair…
IND	indicative (e.g., qué **opina usted** de…/ what do you think about…)
PRES	Present simple tense (e.g., no **tengo** inconveniente…/I don't have any problem…)
REFLEX	Reflexive (verbs) (e.g. ¿…qué **te hace** ser feliz?/ what makes you happy?)
SG DIST	Singular distance (second person plural pronoun 'usted' to establish a distant or formal relationship between the speakers)
SG IF	Singular informal (second singular pronoun 'tú' to establish a close or informal relationship between the speakers)
SUBJ	Subjunctive (e.g. ….cuando **saques** una tarjeta…/…when you take out a card…)

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A Reading of the "ox-'ahaal" (3-conquest) stairs of Yaxchilan

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ABSTRACT:

Despite progress in decipherment of Maya hieroglyphic script in recent years, there are still a great many glyphs that epigraphers are unable to read completely. This can be for a number of reasons. In many cases, the remains of the glyphs are too badly eroded to be properly understood. In other cases, it is due to a lack of consideration of a particular inscription. The hieroglyphic stairway found at the base of structure 33 at Yaxchilan (arbitrarily named stairway 2) has received very little scholarly attention. This is, in part, due to some of the steps' poor condition. One step, VII, is of particular interest. On this step there is a unique story concerning three celestial characters. It is the purpose of this paper to suggest that these three characters are all aspects of the same Maya deity, the Maize God. This argument is grounded in current Maya epigraphic research, and an existing tradition of the multi-faceted nature of Maya supernaturals.

Hieroglyphic stairways were a common architectural form for the Maya. The risers of the stairway were decorated with hieroglyphic text, sometimes carved images, giving them the name 'hieroglyphic stairway'. Although they may have been built earlier, the majority date from the late Classic period. The entirety of the Maya era in Central America has been divided into different eras based on the development of particular artistic styles and conventions. The Classic era (which we are concerned with in this article) ranges from C.E. 250 to 900. When we talk about the late-Classic era, we are primarily concerned with approximately C.E. 650 to 900. After C.E. 900, the Maya region saw what is often termed as a 'collapse', but what can more accurately be described as a decline in architectural and social development. This is known as the *post*-Classic era.

Stairways had a number of functions for the Maya culture. The main purpose was to recount dynastic and political histories. Due to the layout of the stairway, it is an ideal medium through which to establish a chronological narrative, such as a dynastic history. There are also examples of hieroglyphic stairways showing scenes of the Maya ball game. Many scholars, such as Linda Schele and Mary Ellen Miller, agree that the Maya ball game originated around 1500 B.C. with the Olmec people, the mother culture to Mesoamerica. The rules of the game are generally unknown due a lack of written accounts. From what historians have been able to ascertain, the ball game was played with two players or more, using a large solid rubber ball, usually on a designated court area. Despite the lack of accounts, there is a significant amount of carved architecture and ceramic sculpture which offers an insight into this Maya ritual. In the Classic era, ball courts were used as symbols of power and prestige. There are many depictions of rulers and

members of the elite playing the ball game, either as part of a larger ritual to commemorate important cosmological events, or in celebration of major victories over political enemies. Highly decorated panels surrounded the 'I' shaped playing court, and intricately carved hieroglyphic stairs often stood proudly at one end.

One such hieroglyphic stairway is stairway 2, at Yaxchilan. Yaxchilan was a large and important Maya site, particularly significant during the Classic era. It is situated on the southern bank of the Usumacinta River, in Chiapas, Mexico, on the border with Guatemala. Originally named Menché Tinamit by Maya scholar Maudslay, it was renamed by Maler in 1901 as Yaxchilan – a combination of *yax*, meaning "blue" or "green", and *chilan*, which according to Maler meant 'that which lies or is scattered around' (Schele, 1993). Maler thought this was a more appropriate name for the site. This hieroglyphic stairway is attached to structure 33, one of the more central and most elaborately decorated structures at the site. It consists of thirteen panels arranged along the top step, leading up to the structure. I will be concentrating on one panel from the step, panel VII, and giving a critical reading of the characters that are found there.

Step VII of stairway 2 has two distinct and separate bodies of text, which describe two completely separate series of events. To the left hand side of the step there are glyphs that give an account of a 3-Conquest story, involving three supernatural entities. 3-Conquest stories are not uncommon in Maya culture, rulers used them to add to their prestige and reaffirm their skills as warriors by recounting their conquests in battle. What makes the step at Yaxchilan so interesting is that the conquest story is not based on the ruler who commissioned the stairway, or any human conquest. The supernatural nature of the story is entirely unique in the Maya region. Not only this, but each of the three characters on the step are described as "self decapitating" ("*ch'ak-ka-b'a*" in Maya). This form of self sacrifice was unusual, even for the Maya people. Self sacrifice was common among the Mesoamerican cultures as a form of ritual, and only the most important people were permitted to participate. Decapitating oneself, however, was not part of common rituals that involved self sacrifice. Decapitation was more often used in the ritual sacrifice of captives, along with heart removal. There is no mention in the text of the three characters being captives of anyone.

This leads to another problem that scholars have had with this text. According to the hieroglyphs, there are three characters; *hul-nal-yi*, *t'za-ayin*, and *na-nal-(?)-kab-ahau*. The first, *hul-nal-yi*, is known to be the Maize God. He is fundamentally linked to all aspects of life in his associations with fertility, resurrection, creation and the agricultural cycle. The Maize God was also one of the most important deities in the Maya pantheon, and by the late-Classic era had two different forms. A figure known as the Foliated Maize God became distinguishable from the Tonsured Maize God. The

Foliated Maize God is shown in Maya art as a tree, or type of foliated plant, whereas the Tonsured Maize God had a human head, which is elongated to resemble a maize cob. This is not the only example of the Maya having multiple versions for the same deity. The Popol Vuh was the Quiché Maya book of Council, which contained the Maya stories of creation, and an important dynastic history. It introduces a multitude of names and identities for the creator couple: [19]

the Maker, Modeler,

named Bearer, Begetter,

Hunahpu Possum, Hunahpu Coyote … (Tedlock: 1996)

The list goes on, giving the creator couple over a dozen names between them. Similarly, *Itzamna*, another Maya creator God, is given at least half a dozen different names and variations by the Maya. These variations take on different meanings depending on the context. For example, when represented with a tonsured coiffure (a particular type of hairstyle), he is thought to represent an older version of the Maize God (Taube: 1985). However, in his bird form, *Itzamna* becomes *Itzam-ye*, and sits on top of the World Tree to represent his place in the celestial realm (Thompson: 1970). I would therefore suggest that the following two characters, *t'za-ayin*, and *na-nal-(?)-kab-ahau,* fit into this tradition, and are both different aspects of the Maize God proper.

From direct translations we can see that *t'za-ayin* means 'giver caiman'. In Mesoamerican culture, the caiman is directly related to both the Earth, and to water and the Underworld. For the Maya, the world rested on the back of a huge caiman, which drifted in a great lake or sea (Taube, 1989). Its back was the base on which all things grew and flourished. This particular caiman was called *Itzam-Cab-Ain*, and was the terrestrial aspect of the previously mentioned *Itzamna*. *Itzamna* himself has close connections with the Maize God, as both are related to the creation of humans and life. They are often seen together, particularly in the post-Classic codices. The Maya codices are folded books created prior to the Conquest of Mesoamerica. They contain information regarding the practical and religious life of the Maya. Today there are just four known surviving codices.

In other representations of the all-important World Tree the caiman can also be given this guise. The World Tree grew at the centre of the Earth, and was believed to have connected the heavenly, terrestrial and Underworld realms. Stela 25 from Izapa, an early Maya site, and pillars from the north temple of the Great Acropolis at Chichen Itza are two examples of the convention of depicting the caiman as a World Tree in Maya culture. This immediately links *t'za-ayin* to the Foliated Maize God, whose representation is also a tree.

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[19] The creator couple, Xmucane and Xpiyacoc, were the first two beings in existence. They helped to create the world and the heavens. They were the grandparents of the Hero Twins, who played a huge part in the Popol Vuh.

It is my contention that the *t'za-ayin* is the caiman counterpart and a representation of the terrestrial aspect of the Maize God. I have translated the final character, *na-nal-(?)-kab-ahau*, as First Maize Earth Lord. Mayanists such as Karl Taube believe the Tonsured Maize God is the Classic 'prototype' to Hun Hunahpu from the Popol Vuh, a Quiché text transcribed in the sixteenth century. Hun Hunahpu is one of the sons of the creator couple who, after a series of unfortunate events, found himself sacrificed and decapitated in the Underworld. His sons, the Hero Twins, were able to reunite his head and his body, and he was resurrected and reborn as the Maize God. Once the Maize God was resurrected, he performed a ritual which resulted in the first maize plant being created.

According to the Popol Vuh, the corn that was found to make the first humans came from the 'Split Place, Bitter Water Place' (Tedlock, 1996). This refers to a cave that is probably surrounded with water. I would argue that the scenes depicting the Maize God being transported by the Paddler Gods show them travelling from the Underworld (where Hun Hunahpu was reborn) through the 'bitter water place' to the cave ('split place'). I believe that it was here the Maize God was resurrected, and that he performed an auto sacrifice ritual using the tools he carried in the bag. According to Maya myth, the Maize God performed self sacrifice rituals to create the first World Tree (Shele, 1993). The Classic Maya glyph for self sacrifice is the hand scattering glyph *ch'ul / k'ul*, which depicts droplets falling. *Ch'ul* is also an adjective to describe something as "sacred" or "divine". These falling droplets could also be interpreted as seeds being scattered. It could be suggested that the Maize God's sacrifice of blood was transformed into seeds which took root in the 'split place' and sprouted into the first maize plants. It is because of the link between self sacrifice and the *ch'ul* glyph that this aspect could be part of the Maize God, the creator of the first maize plant, which is linked to the First Maize Earth Lord.

The Maize God creates the World Tree for the current world age, thus making him the *first* maize. Having produced this first seed, all human life will be created from him, as will their sustenance. In a similar way, the Maize God could be a Lord of the earth, he spilled his blood in order to make the soil fertile enough for the maize seeds to grow and produce new life. Alternatively, the 'Earth' component of the name may refer to the 'split place' where the first maize was found, and as such be referring to his reign over the place, rather than the earth itself.

This is an only a brief analysis of the three characters on step VII at Yaxchilan. A more comprehensive discussion would include an in depth analysis of the relationship of the Maize God to *Itzamna*, and a greater degree of scrutiny into the Popol Vuh story. This article has looked to introduce the problem of the *ox-'ahaal* step at Yaxchilan to the reader, and

suggest one possible interpretation for it. By suggesting that *tz'a-ayin* and the First Maize Earth Lord are both aspects of the Maize God, I have placed them into an existing tradition within Maya religion. This will be the basis of further research, by the author, in a project which is based around all of the steps on Yaxchilan hieroglyphic stairway 2.

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Carer or Career: an exploration of the current debate surrounding professionalisation in nursing.

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ABSTRACT

The caring professions will come under increasing strain during the century ahead. Increased litigation, falling investment, human rights reform and healthcare policy changes have all had a great impact on the various staff of the UK's statutory and independent health services. Inevitably, as these staff endure change and their practice develops and improves, our conception of their position in society alters. This paper serves as an overview of the debate surrounding professionalisation in nursing and attempts to tie up the relevant issues for nurses and for those dependent upon them as carers.

It has recently entered the news that nursing is to undergo an educational upheaval with a shift for nursing education moving in its entirety onto degree level programmes by the year 2013 (Bowcott, 2009). This represents change on a grand scale in terms of nursing's public image and the regard in which it is held by society.

Nursing, as a form of care, has existed for millennia. Brown and Gobbi point out that the Greeks and Romans cared for their sick in similar ways to modern nurses (Gobbi, 2007). Nevertheless, nursing in its current format as a type of work or even as a profession, has only existed since the Crimean War in which both Mary Seacole and Florence Nightingale worked. Nightingale, perhaps the more historically significant of the two given her influence over nursing practice subsequent to her organisation of the Scutari Military Hospital during the conflict, thought of nursing as a 'calling' (Selanders, 1993). Leaving aside the spiritual sense in which the statement was originally intended, 'calling' is an important concept I will draw upon in greater detail.

A calling should be seen as an internal desire to operate in a position to which the individual is devoted and perceives as inherently valuable. If this is what attracts us to become and motivates us to remain nurses then it is a crucial element in any discussion of the nature of our practice. The ability to do one's job effectively is determined by a nurse's passion for their art both in terms of maintenance of knowledge and in terms of motivation to operate efficiently. Consequently, it may be argued that professionalism and the financial and status benefits it brings would reduce the quality of nurses joining the health services. Can the notion of 'calling' be reconciled with professionalism? Furthermore, are we in control of its destiny if it is not

already a profession or does the nature of nursing prevent it from being so at all?

Florence Nightingale (1859) believed that the goal of nursing was to 'put the patient in the best condition for nature to act upon him'. Many other theories have followed Nightingale's, but all have emphasised the caring element. Another popular definition is that of the American nursing educator and writer Virginia Henderson:

The unique function of the nurse is to assist the individual, sick or well, in the performance of those activities contributing to health or its recovery (or to peaceful death) that he would perform unaided if he had the necessary strength, will or knowledge and to do this in such a way as to help him gain independence as rapidly as possible. Henderson (1967, p15).

Geoffrey Millerson describes six attributes necessary to define a profession:
    a) A profession involves a skill based upon theoretical knowledge.
    b) The skill requires training and education.
    c) The professional must demonstrate competence by passing a test.
    d) Integrity is maintained by adherence to a code of conduct.
    e) The service is for the public good.
    f) The profession is organised. (Millerson, 1998, p4).

We can refer back to Henderson's definition to identify nursing's skill. In order to suggest nursing is a profession involving a skill based upon theoretical knowledge however, we must identify the theoretical knowledge held by the nurse. The nursing discipline has a unique body of knowledge comprised of conceptual frameworks, theories and practice models but despite this vast body of literature, few nurses actually base their practice upon these nursing theories (Logan et al, 2004). As Margretta Styles points out,

"The professionalism of nursing will be achieved only through the professionhood of its members." (Styles, 1982, p8).

As long as nurses fail to adhere to the theories they purport to base their practice on then they are failing to be professional. This does not prevent nursing from being a profession however, as not all nurses necessarily fail to base their practice on theory.

Great educational change was instigated through Project 2000 in 1989, as the British government sought to transfer some nurse training into universities (Hansard, 1990). This was clear evidence of a paradigm shift in nurse education towards more advanced learning and training. This has been

further demonstrated recently by plans drawn up at the Nursing and
Midwifery Council (NMC) advising that all nurse training must be at degree
level by 2013 (NMC, 2009). Millerson would suggest the professional nurse
must pass such educational benchmarks to demonstrate their competence.
The courses set up in universities across the UK in response to the demands
of Project 2000 are all regulated and approved by the NMC, which took
over as nursing's regulatory body from the United Kingdom Central Council
(UKCC) in 2002. The foundation of the UKCC had already signalled
financial autonomy from the government on its foundation in 1983. The
NMC not only regulates the register by demanding a demonstration of
competence through passing an approved course, but also ensures that
integrity is maintained. All nurses registered in the UK are subject to the
NMC's Fitness to Practice Procedures, and may be dismissed if they are
deemed to have failed to adhere to the NMC's Code of Conduct (NMC,
2008).

Millerson's fifth requirement, that the professional service is for the public
good, can be easily argued. As the Royal College of Nursing (RCN)
suggested in a recent paper on defining nursing, nurses look after the
community, healthy as well as sick:
"…the purpose of nursing is to promote health, healing, growth and
development, and to prevent disease, illness, injury and disability." (RCN,
2003).
It does not seem unreasonable then to state that nursing is for the public
good.

The final of the prerequisites stated, that of organisation, has already been
discussed. Bodies such as the NMC and the RCN are significant not only in
their ability to regulate and advise practice, but also to project an image of
nursing into society. Lambert and Lambert (2005) lead us to believe that
Millerson's final demand has been met. They suggest a number of
organisations set up to provide the public with adequate protection from
unsafe practice and also to further enhance and advance nursing practice.
Sigma Theta Tau, for example, a research organisation and honour society
concerned with improving standards of healthcare with over 125,000 active
members.

Barring a unique skill based upon theoretical knowledge which may be
contravened by the non-compliance of nursing practitioners as discussed,
Millerson's conditions of professionhood all seem to be adequately met.
However, as Watson points out, nursing is not yet recognised as a profession
by the general public (Watson, 1999). This implies that the power to define
nursing remains in the hands of nursing itself, which raises the question of
whether it stands to benefit from professional status in society, or whether it

would benefit more from a change of direction while there is still the chance
of avoiding professional definition.

Regardless of Millerson's criteria, a great debate has risen through nursing
circles and significant contention still exists around the issue of
professionalism. Friedson (1986) states that a profession is an occupation
which achieves prestige and then power and money. It is important for us to
question whether this would benefit healthcare in general. Is the career nurse
interested in progression, power and status also concerned with their
'calling'?

Etzioni (1969) and Forsyth and Danisewicz (1985) all suggest that nursing is
in fact a semi-profession due largely to the lack of autonomy of practice.
Etzioni defined nursing as an occupation with less autonomy and less
involvement in the creation and application of knowledge. It is significant
however to note the dates of these articles; the emergence of new roles such
as the Nursing Specialist is evidence of the increased autonomy enjoyed by
modern nurses (Castledine 2002). Vollmer and Mills (1966) try to persuade
us that professionalisation is a dynamic process. The collective efforts of
nursing organisations such as the RCN might therefore change Etzioni's
view. What I will proceed to discuss is whether changing this view would be
beneficial to nursing and whether we ought to pursue professional status at
all.

The benefit to be found in professionalisation has also proven a contentious
issue in the debate. In the prologue to 'Postmodern Nursing and Beyond',
Jean Watson (1999) describes how nursing struggles within itself and the
world around it. She describes how nursing struggles to be seen, heard and
valued for its strengths whilst remaining immobile in its struggle for
authenticity. Indeed, Muff (1982) suggested that the nurse has retained the
image of 'handmaiden to the physician' and Jutras (1988) reiterates this
point. Professionalisation arguably offers the modern nurse the
authentication required to debunk this dated stereotype and begin to be seen,
heard and valued by society and by medical colleagues in the healthcare
setting. The contemporary 'professional' nurse would benefit from
recognition of their efforts in society and for their skills. Furthermore, the
same nurse would be equally valued by their employers, not only in
monetary terms, but in terms of the value attributed by colleagues and clients
to their thoughts, feelings, opinions and choices as a part of the decision-
making process in any productive healthcare team.

Sigma Theta Tau International have attempted to advance nursing practice
by instigating movements such as 'Nurses for a Healthier Tomorrow'. Such
efforts by professional organisations displays a need for nursing to be taken

seriously in its own right and this requires the eradication of preconceptions such as that of the nurse as an assistant to the doctor. This image exists both in the working environment and in society at large (Jutras, 1988). In order to deliver excellence and value in care, the informed and practical decisions made by nurses in the care setting must be taken into consideration and implemented to the benefit of service users.

Liaschenko and Peter argue that emphasising nursing as an autonomous profession is unproductive as it is relational health care work, stating that "striving for uniqueness can move the focus of a group's efforts on to the group itself, taking it away from those the group has intended to serve." (Liaschenko and Peter, 2004, p490). By this Liaschenko and Peter mean that nursing is not only focussed upon the practitioner-patient relationship, but that it is also focussed upon facilitating and co-ordinating care within highly complex organisations. As they rightly suggest, this is an important aspect of the nurse's role and we must consider that it may not be entirely beneficial for nursing to pursue professional status. Losing focus on holism and management in this way may lead us to more insular and less global practices, reducing the quality of the nurse's uniquely holistic care. In addition to this, Rutty (1998) suggests that nursing must be careful about its aims and direction with regard to professionalisation and warns that it risks losing focus on care.

Chambliss (1996) invites us to consider that nurses 'do whatever nobody else wants to do', implying that their work can be tedious, unpleasant or difficult. It is important therefore to consider whether a 'professional' nurse not motivated by calling would perform essential yet possibly menial tasks required for the adequate care of a client or whether their career would take precedence over their practice.

Anthony Heyes (2005) argues that nursing represents better 'value' to society as a 'vocation' as it avoids attracting the 'wrong sort' to the occupation. He argues that those nurses prepared to work for less than what would be considered a 'professional' wage are the same nurses motivated by the need to care and are better for it. It could be said therefore that professionalisation may attract others besides those who are motivated by 'calling' alone, which is potentially damaging to quality of care.

Folbre and Nelson (2006, pp130) however, suggest that Heyes has neglected the effect of pay on employee morale and displays bias between nursing and other professions, they ask: 'Why don't we see similar articles on badly paid executives being good executives?'. It can also be posited that without adequate status and reward, academic and driven individuals are put off joining the profession which leads to a shortage of new knowledge entering

the occupation. Klaas (1961) would agree, arguing that the motivation of service to society (which helps to define a profession according to Millerson's criteria) should be adequately rewarded.

In conclusion, I believe the solution to this final conflict lies within Advanced Nursing Practice (ANP) and new Nursing Specialist roles. Whilst Heyes is right to suggest that nurses motivated solely by career may be more likely to overlook essential caring tasks, he is wrong to propose that existing nurses should not be rewarded for it. Equally Folbre and Nelson are right to suppose that financial reward and increased status are motivating to intelligent and driven nurses from a strong academic background, but they fail to acknowledge Heyes' prudent observation. Further, as Vollmer and Mills have stated previously, as nurses we still have the power to influence public perceptions to the benefit of service users and we can thus deter Heyes' selfish career-driven nurses from joining the profession by retaining the notion of vocation for basic nursing. As Millerson has suggested however, despite public perceptions to the contrary, nursing still has the right to call itself a profession, at least of some sort – semi or otherwise. We may still benefit from Folbre and Nelson's motivated and intelligent nurses however by encouraging them to build towards and succeed as *professional* Nurse Specialists, with all the status and financial reward that those roles might bring.

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Lost in discussion: Subjectivity and its organisational implications

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ABSTRACT

This paper was written for a course on managerial decision-making in 2008. The main points arising throughout the following discussion are based around questions of personal identity and perception in relation to decision-making within an organisational context. Is individual subjectivity influencing decision-making and if so how do organisations cope with this phenomenon? The view taken here is that although rational theory has been the basis of evaluating organisational decision-making, people's (as in employees') subjectivity can hardly be denied, but found in everyday corporate politics. What we should critically observe is the occurrence of mechanisms of power and control in an attempt to constrain the former. Hereby a special focus is put on embedded forms of normative control within corporate culture.

It seems that after decades of exhaustive publishing about 'decision making' and its processes we are left in a rather aporetic state with the insight that there is no single solution to the issue. Classical theories such as 'rationality' (Weber, 1974), as well as more recent ones (e.g. expectancy; first and foremost by Victor Vroom), provide us with a significant amount of empirical data and all in their own right seem to contain some sense of truth. Nevertheless doctrines of an omnipotent rational logic have dominated academic thought and consequently social as well as economic science's effort over man's reason for much of the twenty first century. At the same time theorists of human behaviour (e.g. Simon, 1972) have long questioned the rationality of human actions and thinking, and its implications for predicting them. Is the complexity of human decision-making too individualised to draw constructive assumptions? In this essay I will discuss the problem of subjectivity and its implications for organisations.

In order to make a statement about their organisational implications, it is necessary to consider decision theories in the face of those concerning human behaviour. Most decision-making is referred to in normative and prescriptive theories, based on rational choice theory and normative models, which again rely on the axiom of human rationality; hence they set the premise 'that all alternatives, the probability distribution of consequences conditional on each alternative, and the subjective value of each possible consequence are known' (March in Shapira, 1997: 12) to the decision maker. On the other hand, descriptive theory focuses, in an empirical manner, on how decisions are actually made. One of the main forces to interfere with the notion of the functional, rational actor can be found in the subject itself. Perception is one of the main cognitive processes in human experience. We might call the

impressions we experience, process and convert into a general image, knowledge or identity, but in fact it is the sum of all the perceptions and their consequent thoughts. Our world evolves around a principle that is best described as *"Esse est percipi"* [20]. That is where the crux of perception lies; it is mostly subjective and therefore the very process of 'perceiving' manipulates reality into what we feel it to be. Nevertheless decision theories claim that preferences are abiding, concise and unswayed and thus ignore ambiguity caused by individual perception and interpretation. Although prescriptive decision theory takes into consideration cognitive limits, Simon (1979) states that these 'idealized models of optimizing entrepreneurs, equipped with complete certainty about the world – or at worst, having full probability distributions for uncertain events – are of little use'. Therefore, he claims that those models are theories of 'how to decide rather than what to decide' (Simon, 1979: 498). Even if the individual had this data and could process it in an adequate manner, he/she would still interpret it in a subjective manner, or as Flaubert put it: 'There is no truth. There is only perception' (Gustave Flaubert, 1957). The list of cognitive interventions (e.g. confirmation bias - the focus on selected data ignoring unsupportive data (Plous, 1993).) is endless and it always occurs in a pre-defined environment. This also penetrates the rational model since it is likely to create another bias (e.g. ethnocentrism (Martinsons, 2001)), thus it should be clear that no individual is in the position to make perfectly rational decisions; reality does not equal rationality. In accepting these constraints the term 'bounded rationality' (Simon, 1997) was coined, claiming that people would tend to opt for rational choices within 'limitations of computational capability, the organization and utilization of memory' (March, 1978), which would lead to a 'satisficing' ('satisfy' and 'suffice') decision, rather than an optimal one. In addition, perception is not isolated but continuously remodelled by people's need to set new knowledge in perspective with existing perception and by interpreting relationships.

It should also be mentioned that organisations are exposed to new levels of uncertainty in a much more complex way due to globalization, capricious markets and the occurrence of new forms of organisational design (e.g. organisations that only exist in cyberspace), which further complicate organisational decision-making. As a result one might question the individual's ability for rational judgement in general, and in particular within an organisation. Knowing this, could we not assume that most organisational decision-making processes are inherently flawed by its operators opting for common sense, heuristics and acceptable solutions, rather than perfect and rational ones? Indeed Isenberg states that senior managers use their intuition for various issues and 'often ignore the implied linear progression of the rational decision-making model and jump opportunistically from phase to

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[20] Bishop George Berkley (1685-1753, developed the idea of Subjective Idealism, "Esse est percipi" – "To be is to be perceived" or "it is because it is perceived")

phase' (Isenberg, 2001). Barnard (1938) goes as far as to call the whole process opportunistic. If we leave aside this possibility or attribute it to senior managers' privileged position within organisational hierarchy and discuss the problem on a more general scale, i.e. the organisation in its entirety, the problems concerning perception and judgement still prevail. Regarding the former, should organisations assume some sort of employee good will? Simon (1979: 502) mentioned that

A fundamental characteristic of modern industrial society is that most work is performed… by persons who have accepted employment in a business firm and the authority relation with the employer that the employment entails. Acceptance of authority means willingness to permit one's behaviour to be determined by the employer, at least within some zone of indifference or acceptance.

Nevertheless the idea that people come together in organisations to pursue a greater goal is unrealistic; rather we alternately work with and against each other (Fleming, 2007). To better understand the implication of subjectivity one can assume that an organisation is in fact a 'political arena' (Bolman and Deal, 2003), in which according to Bolman and Deal five points should be considered key: 'Organizations are made of coalitions of diverse individuals and interest groups' with 'enduring differences in values, beliefs, information, interests, and perceptions of reality. Most important decisions involve allocating scarce resources', which lead to conflict central to organizational dynamics and underline power as the most important asset, thus claiming that 'decisions emerge from bargaining, negotiation, and jockeying for position among competing stakeholders' (Bolman and Deal, 2003: 168). So individuals are not only led by their subjective perception but also act upon it. This can be observed in their participation in political actions within organisations; people aspire to assuage their organisational, as well as their individual, preferences and needs. It does not matter whether they are internal or external to the organisation as long as they perceive that the decision will affect them.

Following this notion, it has become evident that politics are a source of conflict, since they occur 'when interests of one party clash with interests of the other party' (Huczynski and Buchanan, 2004: 791), or 'different readings of the organisational text' i.e. colliding subjective perceptions (Jackson and Carter, 2000: 25). Even though the proposition of coalitions differs from the classical hierarchical pyramid it also emphasises the importance of power, or power relations respectively. The question then is what an organisation will be willing to do in order to make employees stay in line? This will depend on the organisation's view of their workforce, i.e. the notion that humans are an unstable resource and averse decision-makers (Janis, 1979) or motivated, capable, and committed employees; as well as its over-all intentions, whether they pursue certain 'business ethics' or any other formalised notion of corporate responsibility or whether they see themselves in a 'Friedmanesque'

tradition, i.e. that the sole object of any capitalist organization is to make profit (Friedman, 1970). The latter determines that the employee is always 'the agent of the individuals who own the corporation or establish the eleemosynary institution, and his primary responsibility is to them' (Friedman, 1970). Consequently (in mainstream management literature) conflict and resistance are treated as, not intrinsic, but reactive problems to be overcome. This has a direct influence on the way an organisation will let people make decisions, i.e. the scope of control mechanisms they will impose upon their employees.

To understand the implication of power tactics one might look at different notions of power. Dahl (1957) describes power as a blatant phenomena visible in conflicts, nevertheless he claims that interests are apparent and thus concentrates on conflict behaviour in decision-making processes, i.e. who makes whom do what; Foucault (1998: 95) sees power and resistance as coexistent, 'where there is power, there is resistance'; Bacharach and Baratz (1962) add that power is also exerted in non-decision-making, i.e. the assumption of resistance and anti-behavioural activities as tools of power, hence it seems that the organisational implications of the subjective self have an immediate effect on individual and organisational motivation; Lukes (1974), on the other hand, asserts that power has been institutionalised and accepted, and people or organisations have the power to define the meaning of reality.

One implication for organisations is to not only monitor and measure performance through technology, but to use the power of corporate culture, i.e. the notion that organisations transfer a ready-made perception to its members. Once a perception is conveyed to a group it will become an integral part of the individual self-perception and ultimately blend into a person's identity. Thompson and McHugh (2002: 233) also argue that we tend to generate a personality within our workplace and that this process is in fact 'an actively managed and continually rehearsed manipulation of our identity.' Organisations channel collective perception and create a dominant reality. Hofstede (2005: 4) describes culture as 'the collective programming of the mind', which brings up the question to what extent individual perceptions are open to manipulation. If organisations indeed have the power to 'talk things into being' (Oswick, 1997), they can certainly manipulate perceptions, maybe even the way employees think and make decisions (e.g. 'this is how things are' or 'this how we do things around here'). Another method to secure cooperation without spoiling engagement can be observed in notions of 'empowerment', i.e. referring more complicated tasks and decisions to subordinates to make them feel good about themselves and generate motivation. Although recent findings suggest that 'empowerment' raises personal welfare and employee engagement, the concept has been widely criticised as 'attitudinal shaping' (Wilkinson, 1998). Supposedly

modern market rationality, through mechanisms as downsizing, re-engineering and outsourcing, i.e. the generation of job uncertainness, prevents the individual from influencing organisational decision-making and thus makes normative control redundant. On the other hand we can see its consequences, now more than ever, in the form of selection and rigid recruitment; 'you either buy into their norms or you get out' (Peters and Waterman, 1982: 77). Whereas normative control used to cause absenteeism, irony or alienation and a growing number of work-related health issues (e.g. depression, drug abuse etc.) since coercive cultural conformity forced employees to have a depersonalised organisational self and a private self; neo-normative control emphasizes the importance of authenticity, i.e. the encouragement to "be yourself" (Fleming and Sturdy, 2007) at work (e.g. the current 're-enchantment' of work through spirituality (Casey, 2002)), nevertheless it excludes those who refuse to share their private life and therefore can be seen as just another form of coerced conformity. Of course one could argue that the formation of groups will prevent the influence of an individual over decisions. Nevertheless, in terms of perception, it will only lead to more complexity and therefore increase the need for control, which underlines my arguments for the latter.

Modern technology, increased automation and normative control (i.e. ideology) have minimised the effect of human deficiencies and error within organisational decision-making:

Individualism, self-interest and calculative careerism… have superseded the drive to instil organizationally based values and collective identification, [and] neither managerial disenchantment with homogenous cultures nor market rationalism mark the decline of normative control. (Fleming and Sturdy, 2007: 1)

Although this might lead to improved organisational performance one should not disregard the downside i.e. the suppression of the individual self. Furthermore all implications are interpreted reactionally to subordinate action, and no visible effort has been made to handle the implications I have discussed in a constructive manner. Through the consensualising and conditioning of people, and the continuous socialisation of organisational ideology into culture, the power to minimise potential problems in organisational decision-making is insinuated, downplaying uncertainty and relying on the delusion of control. Apart from that the worker is treated as a passive receiver rather than an interpretive and reflective individual; the amount of control an organisation can exert over an individual, as well as over events (e.g. current situation on the financial market) seems to be overestimated.

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Identifying Dyselxic Students: Designing a computer-based dyslexia screening test-prototype for higher education

Alexia Casale

ABSTRACT

This article discusses the challenges involved in developing a computer-based dyslexia screening test for widespread HE usage. These challenges are illustrated through preliminary results from pilot-testing a prototype instrument designed to fill the gap in provision. A number of promising avenues, which mainly relate to two key issues (complexity and processing/reading speed), are outlined in this exploratory research; however, as with all exploratory studies, far larger sample sizes would be required in order to assess reliability and generalisability of findings. First, complex tasks, tapping multiple deficits (thereby circumventing dyslexic students' coping strategies), tend to be more sensitive than tasks which involve a single area of deficit. One of the reasons that existing tests for use with HE students do not seem to hold up under scrutiny (see Casale 2009) may be that the tasks involved tap only a single area of *deficit* when they tap multiple cognitive domains at all. Second, data analysis indicates that time taken to complete cognitive tasks (i.e. processing-speed), rather than accuracy, is a more effective measure for identifying dyslexic HE students. These findings have far-reaching implications for the types of 'reasonable adjustments' that the Disability Discrimination Act requires that dyslexic students be afforded in order to allow them to study and perform without disadvantage compared to non-dyslexics. However, this deficit is not significant merely in relation to extra time in exams: it potentially has much more serious implications in relation to dyslexic students' ability to cope with the volume of reading, turn-over of essays and other work at university.

Introduction[21]

Developing a computer-based dyslexia screening test-prototype specifically targeted at university students is a challenging and complex endeavour, not least due to the lack of an accepted definition of dyslexia and the general difficulties of creating effective cognitive tests for high-performing adults. This exploratory research illustrates the importance of operationalising competing definitions and theories of dyslexia, in constructing and piloting a new instrument; by operationalising a range of definitions and theories, it is possible to explore and, thus, determine the types of tasks that reliably

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[21] For a discussion of the need for a new computer-based dyslexia screening test in HE, an analysis of existing screening tests (both computer- and paper-based), and an exploration of the problems associated with the many different and, indeed, competing definitions (and associated theories) of dyslexia, see Casale, Alexia. (2009). Identifying Dyslexic Students: The need for computer-based dyslexia screening in higher education. *Estro*, 1(1), 119-143.

identify dyslexics in the HE population. Thus, a number of promising avenues for future work are identified and discussed.

In attempting to develop a prototype test to screen students for dyslexia, the working definition employed adopts and adds to the World Federation of Neurology definition: *'These fundamental cognitive difficulties, manifested in difficulties with reading, writing and related skills, may include phonological, visual, Short Term Memory (STM) and automatisation deficits. Other soft signs may include laterality discrimination and sequencing difficulties. Dyslexia is a heterogeneous disorder with individuals evidencing unique profiles of strengths and weaknesses'[5].*

Test Design

A range of theories were operationalised in designing the screening test prototype in order to avoid *a priori* theoretical assumptions that might bias the test towards identifying one particular pattern of difficulties. If dyslexia is best characterised as consisting of a range of fundamental deficits, operationalising tasks which focus on one (or even several) deficit theories means ignoring other deficits. Adopting a Grounded Theory Methodology (Bryman & Burgess, 1993; Glaser & Strauss, 1967) allows theory to emerge from data; by operationalising various deficit theories in a wide range of tasks, it is possible to allow the data to show which tasks and task-measures (e.g. accuracy, time taken, etc) are most effective in identifying dyslexic students. Research hypotheses can then be constructed, based on the adoption of the deficit theory/theories that the data have shown to most accurately characterise the phenomenon. These hypotheses can be tested by collecting new data, then the theoretical position of the research, and its hypotheses, can be refined, leading to a further stage of data collection and analysis. A key aim in the development of the test-prototype was to operationalise the range of deficit theories as comprehensibly[6] as possible, given practical limitations.

Drawing on the literature on IQ, and ability tests relevant to dyslexia (e.g. Weschler Adult IQ test [Weschler, 1955], Raven's matrices [Raven et al., 1962], and Wide Range Ability Test [Wilkinson, 1993]), a bank of 34 tasks (including 77 subtasks) was compiled. To organise this large number of tasks, six (non-analytical, organisational) categories were identified: (1) Short Term Memory (e.g. digit span), (2) sequencing (e.g. anagrams), (3) verbal reasoning (e.g. word-based arithmetic problems, identifying semantic similarities) and non-verbal reasoning (e.g. matrices), (4) phonological awareness and written language skills (e.g. non-word identification), (5) visuo-spatial abilities (e.g. block completion), and (6) self-report questionnaire. As some tasks were relevant to more than one dyslexia deficit theory, categorisation was determined by the primary cognitive domain tapped by the tasks.

Category 1 tasks mainly operationalise STM deficit theories, while Category 4 tasks are primarily relevant to phonological deficit theories.

Category 2 (sequencing) tasks relate primarily to automatisation theories. The anagrams/acronyms, digit-coding (adapted from the Weschler Adult IQ test [Weschler, 1955]) and sequencing tasks require participants to recognise and relate words and letters, symbols and numbers, and sequences of letters/numbers, respectively. The sequences task is one of several which has two components (i.e. sequence pattern recognition and sequence construction); such tasks were included to investigate whether dyslexic students compensate effectively for a single dyslexic deficit, but fail to compensate when two types of deficit are tapped simultaneously. Traditionally, automatisation deficit theories have been operationalised by naming speed tasks (Fawcett & Nicolson, 1994; Wolf & Bowers, 1999), which require verbal answers: a response modality unsuitable for computer-based tests due to current technical limitations. Other tasks designed to provide insight into possible automatisation deficits[7] include a word identification task in which participants must select which one of six simultaneously presented words is a real word (the others are non-words); this is similar to the LADS word recognition task (Singleton et al., 2002b).

Category 3 (verbal and non-verbal reasoning) tasks do not operationalise deficit theories; however, the literature indicated that they might provide useful data. If dyslexics evidenced poorer results on verbal versus non-verbal reasoning tasks, this might indicate that the tasks were, in fact, dyslexia sensitive; the tasks involve similar skills, the main difference being the additional language loading on the verbal task, which might be expected to present difficulties for dyslexics. If dyslexics did not evidence deficits in these tasks, this would indicate that their difficulties were specific (i.e. related to dyslexia), rather than to a general learning disability or other co-morbid factor. This is intended to reassure students who are identified as probably dyslexic by a screening test. Exploring avenues of mitigating possible distress, a key ethical consideration, is often overlooked in test development research. However, following discussions and consultations with the Cambridge University Disability Resource Centre, this issue assumed a position of central importance in ensuring that the research adopted a sound ethical approach. As a benchmark of general ability, to which performance on tasks tapping dyslexic deficits could be compared, the data would also be useful for exploring within-individual performance discrepancies.

It has been suggested that dyslexics have increased skills (as opposed to deficits) associated with the right hemisphere, such as visuo-spatial abilities (Geschwind & Galaburda, 1987; Orton, 1925; West, 1991). Not only would such abilities provide a positive aspect to being identified as dyslexic, but would also be useful in developing compensatory strategies. Research has produced mixed results to date; Von Karolyi (2001) and Von Karolyi et al.

(2003) demonstrated that dyslexics performed faster on an impossible figures test, though Winner et al. (2001) showed that dyslexics performed equal to, or worse than, controls on a number of other visuo-spatial tasks. Category 5 tasks (visuo-spatial abilities) were included to investigate this issue in the HE population.

Category 6 (self-report questionnaire) items were included to investigate other possible indicators of dyslexia which could not be objectively measured by a computer-based psychometric instrument (e.g. difficulty with everyday activities like writing cheques), and to give a cursory indication of whether there might be co-morbid difficulties, such as dyspraxia. This category provides the type of detailed, qualitative information that an interview would tap. As such, this category was not directly linked to any key deficit theory. A learning styles questionnaire was also included, due to its potential to provide suggestions (albeit it basic ones) regarding compensatory strategies (to help mitigate distress in students newly identified as probably dyslexic), despite the fact that meta-analyses by Kavale et al. (1987, 1998), of 39 and 36 studies respectively, indicate that these approaches are not effective.

Methodology

Volunteer participants were recruited from Cambridge University in response to advertisements. Prior to participation, volunteers received information sheets, and signed an informed consent form. Due to the number of tasks involved, the material was divided into three one-hour testing-block sessions (administered in a consistent order). Following each test block, a brief, semi-structured interview was conducted to explore the functionality of the test and the usability of the interface.[8] To ensure anonymity, all data were stored under code-numbers.

The sample was divided into three groups: non-dyslexic, potentially-dyslexic and dyslexic students. The *dyslexic* group comprised students previously diagnosed as dyslexic by a formal assessment with an educational psychologist. Educational psychologists have no standardised method of formal assessment; individual assessors assume different definitions of dyslexia and employ different tests. Although desirable, it was not possible to assess all participants (or even re-assess all formally assessed 'dyslexic' participants) to reliably establish groupings; however, previous diagnosis by an educational psychologist is considered 'gold standard' evidence of dyslexia by most researchers and disability-support professionals. The *potentially-dyslexic* group comprised students who indicated that they might be dyslexic. Participants assigned to this group self-reported that they had similar problems to dyslexic family members, common dyslexic difficulties, and/or had been told by teachers/other professionals that they might be dyslexic, i.e. these participants had not been assessed by an educational psychologist, but had reason to believe that they might be dyslexic. The *non-dyslexic* group comprised students who believed they were not dyslexic, i.e. they had no reason to believe that they might be dyslexic.

Although relatively crude, these criteria for assigning participants to experimental groups are considered adequate in most dyslexia studies, and certainly are in the case of exploratory research. The addition of a *potentially-dyslexic* group refines these basic categories by separating cases likely to prove problematic.

Table 1

Socio-demographic Data for Pilot Participants

	Non-dyslexic Group	Dyslexic Group	Potentially-Dyslexic Group
N	22	10	7
Male	2	6	3
Female	20	4	4
Mean age in years (3sf)	21.1	20.9	21.0
N attended comprehensive/ state school	12	6	5
N attended private/ independent school	10	4	2
Undergraduate	12	6	6
Postgraduate	10	4	1

Note. With regard to ethnicity: one of the dyslexic group answered 'Other', one of the potentially-dyslexic group answered 'Chinese', and all others answered 'White'.

Data are available for 10 dyslexic, 7 potentially-dyslexic and 22 non-dyslexic students for Block 1[9]. The three groups are roughly equivalent in terms of age, assumed cognitive ability and ethnicity, but not equivalent in terms of sex ratio or SES[10]. The sample is roughly representative of the University, with the exception of ethnicity and sex ratio (male to female ratio is approximately 2:3 as opposed to 1:1). Cambridge University is not representative of UK universities in general. General cognitive ability may be assumed to be particularly high at Cambridge University. Similarly, due to the bias towards students from private and independent schools, it may be assumed that more Cambridge students come from families with high SES.

In order to draw any firm conclusions about the validity or reliability of the test, or the individual tasks, the sample would need to be representative of the university, and greater equivalence between the testing groups would be necessary. For any results to be generalisable to the university population as a whole, data would need to be gathered from a range of universities and other HE institutions across the UK. However, as the following analyses are intended to be exploratory, the limitations of the sample (with regard to validity, generalisability and reliability) merit a degree of caution but do not invalidate the usefulness of the data for this purpose.

Results

Three Block 1[11] tasks (see Tables 1, 2 and 3 respectively) will be used as examples to illustrate the most promising findings of the research: Sentence Construction (Which of the six words completes the sentence?), Sequencing (What number/letter completes the given logical sequence?), and Semantic Similarities (Which of the six words means the same as [e.g. cold]?).

Table 2

SentenceConstruction Task: Dyslexic versus Non-dyslexic Students

	Condition 1	Condition 2	Condition 3
n_{dys}	10	17	10
n_{nondys}	29	22	22
N	39	39	32
Mean$_{dys}$ time per item (secs)	9.50	9.07	9.50
Mean$_{nondys}$ time per item (secs)	7.26	6.88	6.88
SD$_{dys}$ time (secs)	1.57	1.92	1.57
SD$_{nondys}$ time (secs)	2.00	1.77	1.77
d.f.	37	37	30
t	3.20	3.69	4.00
Significance level: T-test (equal variances assumed)	0.003**	0.001***	0.000***
Sum of Ranks$_{dys}$	296	459	248
Sum of Ranks$_{nondys}$	485	322	281
Mann-Whitney U	49.5	68.5	27.5
Significance level: Mann-Whitney	0.001***	0.000***	0.000***

Note. n_{dys} represents the number of students in the dyslexic group. n_{nondys} represents the number of students in the non-dyslexic group. The assignment of students to groups is determined by the rules of the relevant experimental condition. Mean$_{dys}$ and SD$_{dys}$ for Condition 1 is the same as for Condition 3, i.e. n = 10, only diagnosed dyslexics are included in the dyslexic group. Mean$_{nondys}$ and SD$_{nondys}$ for Condition 2 is the same as for Condition 3, i.e. n = 22, the 7 potentially-dyslexic participants are not grouped with the non-dyslexic group in these Conditions. All decimal figures are given to 3 significant figures. This note applies to Tables 2, 3 and 4.
*p < .05 **p < .01 ***p < .001*

Table 3

Sequencing Task: Dyslexic versus Non-dyslexic Students

	Condition 1	Condition 2	Condition 3
n_{dys}	10	17	10
n_{nondys}	29	22	22
N	39	39	32
Mean$_{dys}$ time per item (secs)	28.8	25.5	28.8
Mean$_{nondys}$ time per item (secs)	20.8	20.8	20.8
SD$_{dys}$ time (secs)	6.88	8.39	6.88
SD$_{nondys}$ time (secs)	5.56	4.53	4.53
d.f.	37	23.1	30
t	3.69	2.08	3.92
Significance level: T-test (equal variances assumed)	0.001***	[a] 0.049*	0.000***
Sum of Ranks$_{dys}$	296	406	240
Sum of Ranks$_{nondys}$	484	374	288
Mann-Whitney U	49.0	121	35.0
Significance level: Mann-Whitney	0.001***	0.063	0.002**

[a] Levene's test produced significant results, therefore equal variances not assumed formula employed.

* p < .05 ** p < .01 ***p < .001

Table 4

SemanticSimilarities Task: Dyslexic versus Non-dyslexic Students

	Condition 1	Condition 2	Condition 3
n_{dys}	10	17	10
n_{nondys}	29	22	22
N	39	39	32
Mean$_{dys}$ time per item (secs)	14.8	13.6	14.8
Mean$_{nondys}$ time per item (secs)	11.7	11.7	11.7
SD$_{dys}$ time (secs)	2.98	3.53	2.98
SD$_{nondys}$ time (secs)	2.83	2.59	2.59
d.f.	37	37	30
t	2.96	1.97	3.05
Significance level: T-test (equal variances assumed)	0.005**	0.057	0.005**
Sum of Ranks$_{dys}$	281	413	229
Sum of Ranks$_{nondys}$	499	367	299
Mann-Whitney U	64.0	114	46.0
Significance level: Mann-Whitney	0.008**	0.039*	0.008**

* p < .05 ** p < .01 ***p < .001

It was not possible to discriminate dyslexic and non-dyslexic students on the basis of absolute scores on Block 1 tasks, though dyslexics required significantly longer than non-dyslexics to complete many of the tasks, mirroring results from earlier usability testing (see footnote 8).

The Sentence Completion task taps skills (comprehension and grammatical knowledge) not expected to be deficient in dyslexic university students; as anticipated, few participants answered any questions incorrectly, though dyslexics took significantly longer on the task than non-dyslexics. A highly significant difference was found between the groups (at the 0.003 and 0.001 levels respectively) using both parametric (between-samples T-test) and non-parametric (Mann-Whitney) tests.

On the Sequencing task, which taps areas of dyslexic difficulty – specifically, sequencing and automatisation skills (i.e. automatic knowledge of the alphabet/numerical system) - similar results were obtained, with no significant difference between groups in terms of absolute score, although dyslexics required significantly longer (at the 0.001 level for both T-test and Mann-Whitney) to complete the task than non-dyslexics.

Results from the Semantic Similarities task, which taps vocabulary and comprehension, followed the same pattern, with dyslexics completing the task significantly more slowly than non-dyslexic students (at the 0.005 level for T-test and 0.008 level using Mann-Whitney).

These analyses (Condition 1) employed the standard practice of assigning research participants to the dyslexic sample on the basis of previous dyslexic diagnosis, and considering all other participants non-dyslexic, including the potentially-dyslexic group (i.e. non-dyslexic and potentially-dyslexic groups are combined).

Grouping potentially-dyslexic students with formally diagnosed dyslexics (Condition 2), still resulted in a significant difference in task completion time between the dyslexic and non-dyslexic groups (Sentence Completion: at the 0.001 level T-test, and 0.000 level Mann-Whitney; Sequencing: at the 0.049 level T-test, and 0.063 level Mann-Whitney; Semantic Similarities: at the 0.057 level T-test, and 0.039 level Mann-Whitney), though the significance was borderline for Semantic Similarities on the T-test and non-significant (though approaching significance) for Sequencing on the Mann-Whitney.

When potentially-dyslexic students were omitted from analysis (Condition 3), the difference between the groups was highly significant at the 0.000 level (T-test and Mann-Whitney) for Sentence Completion, at the 0.000 (T-

test)/0.002 (Mann-Whitney) level for Sequencing, and the 0.005 (T-test)/ 0.008 (Mann-Whitney) level for Semantic Similarities.

Table 5

Reading Time for Task Instructions: Dyslexic versus Non-dyslexic Students (Condition 1 and Condition 3)

	Sentence Construction		Sequencing		Semantic Similarities	
	Cond. 1	Cond. 3	Cond. 1	Cond. 3	Cond. 1	Cond.3
n_{dys}	10	10	10	10	10	10
n_{nondys}	29	22	29	22	29	22
N	39	32	39	32	39	32
$Mean_{dys}$ time per item (secs)	9.21	9.21	38.3	38.3	42.0	42.0
$Mean_{nondys}$ time per item (secs)	8.89	8.38	30.8	30.8	27.3	26.8
SD_{dys} time (secs)	2.47	2.47	6.50	6.50	16.5	16.5
SD_{nondys} time (secs)	3.67	2.66	8.11	7.53	9.81	7.66
d.f.	37	30	37	30	11.3	10.8
t	0.258	0.839	2.64	2.69	2.66	2.79
Significance level: T-test (equal variances assumed)	0.798	0.408	0.012*	0.011*	[a] 0.022*	[a] 0.018*
Sum of Ranks$_{dys}$	224	191	280	228	288	234
Sum of Ranks$_{nondys}$	557	338	500	300	493	295
Mann-Whitney U	122	84.5	65.0	47.0	57.5	41.5
Significance level: Mann-Whitney	0.456	0.305	0.009**	0.009**	0.004**	0.004**

[a] Levene's test produced significant results, therefore equal variances not assumed formula employed.

* p < .05 ** p < .01 ***p < .001

The time taken to complete tasks (i.e. processing-speed) appears to be a robust and consistent discriminator, with dyslexic students even requiring significantly longer to read instructions on Sequencing (at the 0.012 T-test/0.009 Mann-Whitney level for Condition 1; 0.011/0.009 for Condition 3) and Semantic Similarities (at the 0.022 T-test/0.004 Mann-Whitney level for Condition 1; 0.018/0.004 for Condition 3), though results did not reach significance for Sentence Completion for Condition 1 or 3.

Semantic Similarities taps comprehension, Sequencing taps sequencing skills for verbal and non-verbal information, and Sentence Construction taps knowledge of written language rules (grammar and spelling); therefore, the dyslexic students' apparent processing-speed deficit is found on verbal and non-verbal tasks, across a range of cognitive domains, and is not restricted to phonological processing or reading speed.

Discussion

These findings provide support for the argument that traditional adult dyslexia tests, which often rely on absolute scores, may be inappropriate for university students, since high-achieving dyslexics may obtain ceiling-level scores even on tasks tapping dyslexic difficulties. Instead, the time taken to complete items, tasks and even reading of task instructions appears to have a greater discriminatory power for this population.

The importance of timing variables can be conceptualised as a measure of processing speed; therefore, the data (especially from Sequencing) could be interpreted as supporting the automatisation deficit theory. Sentence Completion and Semantic Similarities can be grouped with instruction reading as involving reading plus comprehension; it could be argued that in non-disabled, adequately educated adults, reading is usually an automatic skill, as is knowledge of the number system/alphabet (as in Sequencing). However, all deficit theories relate to posited fundamental processing difficulties which underlie problems in reading; therefore, the findings could, equally, be used to support these theories. Only by comparing results from a wide range of tasks, which effectively operationalise the different deficit theories, as well as other relevant areas of research, could this claim be lent significant weight.

Significance levels improved when potentially-dyslexic students were omitted from analyses (Condition 3), rather than grouped with either the non-dyslexics (Condition 1) or with the diagnosed dyslexics (Condition 2), suggesting that the potentially-dyslexic group is not homogenous but contains both non-dyslexic and (previously unidentified) dyslexic students. The fact that these tasks appear sensitive to the presence of undiagnosed dyslexics is particularly promising, as a screening test must identify such students rather than simply replicating experimental groupings, i.e. distinguishing students with previous, formal diagnoses of dyslexia from those without.

Combining the potentially-dyslexic group with the dyslexic group (Condition 2) increased the significance of results for Sentence Construction, but not Sequencing or Semantic Similarities. These finding might indicate that Sequencing and Semantic Similarities are less sensitive (significance levels were lower for all conditions in Semantic Similarities versus Sentence Construction). However, this could also be interpreted as indicating that not all the potentially-dyslexic students were actually dyslexic, and that these two tasks discriminate between those students in the potentially-dyslexic group who are, in fact, dyslexic and those who are not.

Table 6

*Mean Task Times for Individual Participants in the Potentially-Dyslexic Group
versus Mean Times for Dyslexic and Non-Dyslexic Groups*

Participant Identifier	SentenceCompletion (secs)		Sequencing (secs)		SemanticSimilarities (secs)	
	Task	Instruction Reading	Task	Instruction Reading	Task	Instruction Reading
AA	17.7**	36.7*	12.2**	12.6**	27.8*	33.4
BB	5.33	9.60	4.40	4.10	9.99	15.4
CC	11.1	23.6	7.70	10.2**	18.8	47.8**
DD	12.6	20.4	9.43*	12.9**	17.0	29.4
EE	12.4	56.9**	8.90*	6.60	36.1**	23.8
FF	13.6*	35.6*	8.15	5.70	17.9	37.7*
GG	10.3	20.3	8.48*	21.3**	17.8	26.5
Mean$_{dys}$ (n=10)	14.8	42.0	9.50	9.21	28.8	38.3
Mean$_{nondys}$ (n=22)	11.7	26.8	6.88	8.39	20.8	30.8
Mid-point	13.3	34.4	8.19	8.80	24.8	34.6

Note. All decimal figures are given to 3 significant figures.

* mean time of potentially-dyslexic participant is above the mid-point between the mean times of the dyslexic and non-dyslexic group
** mean time of potentially- dyslexic participant is higher than the mean time for the dyslexic group

By examining the data from the 7 potentially-dyslexic students on a case-by-case basis, it is possible to strengthen the case for these interpretations. Participant AA's mean item times were more than those of the dyslexic group as a whole on Sentence Completion and Sequencing, and above the midpoint (between the mean time of the dyslexic group and the non-dyslexic group[12]) on Semantic Similarities; instruction reading times were above the mid-point for Sentence Completion, and higher than the dyslexic group on Sequencing. Only with regard to the instruction reading time for Semantic Similarities were the data for Participant AA more similar to the non-dyslexic group. In a further Block 1 Clocks task (matching clock-faces to numeric or verbal descriptions of a specific time), which has face validity as a dyslexia sensitive measure, Participant AA's instruction reading time and mean task time were higher than the mean times for the dyslexic group. This appears a strong indication that Participant AA is dyslexic, though not yet formally diagnosed as such.

On the other hand, Participant BB's data is more similar to the non-dyslexic group than the dyslexic group on all counts, including the Clocks task; therefore, it is likely that Participant BB is not dyslexic, despite self-reporting concerns about being an undiagnosed dyslexic.

The pattern of data from the other 5 potentially-dyslexic participants (CC-GG) is less clear cut. This may be due to the fact that they are borderline cases, have performed in anomalous ways, or because the small samples sizes involved means that the dyslexic and non-dyslexic means have been skewed by individual anomalous results. The results do support the conclusion that the potentially-dyslexic group cannot be effectively grouped with either dyslexics or non-dyslexics.

This would explain why the significance of results increases when this group are omitted from analyses (Condition 3 versus Condition1) for all three tasks, including instruction reading. The fact that the potentially-dyslexic group is not cohesive also clarifies why it cannot be effectively combined with the dyslexic or non-dyslexic group, and why Conditions 1 and 2 evidence an inconsistent pattern of results; combining the potentially-dyslexic group and non-dyslexic groups (Condition 1) gave higher significance levels than combining the potentially-dyslexic group and dyslexic groups (Condition 2) on Sequencing and Semantic Similarities, and had little effect on significance for Sentence Construction. The fact that combing the potentially-dyslexic group with the dyslexic group (Condition 2) has a negative effect on significance levels may indicate that the 5 borderline cases (Participants CC-GG) are better grouped with Participant BB (probably non-dyslexic), i.e. as a whole these cases represent a more non-dyslexic, than dyslexic, profile of results. This might also explain why the group mean for non-dyslexics on Sequencing, Semantic Similarities, including instruction reading, does not change when potentially-dyslexic students are included. Equally, a simpler explanation is that, as the non-dyslexic group is twice as large as the dyslexic group (n_{dys}=10, n_{nondys}= 22), the results of the potentially-dyslexic group exert a lesser effect on the non-dyslexic group than on the dyslexic group.

The results of this research support the view that university students use compensatory strategies and high general ability to perform at ceiling level, even on tasks previously identified by the literature as tapping areas of dyslexic deficit. Although dyslexic students may achieve equivalent scores to non-dyslexics, precise timing data from computer-based administration of the tasks demonstrate that it usually takes them significantly longer to do so. This speed deficit appears to be consistent across a range of tasks, including reading of task instructions on Sequencing, Semantic Similarities, though not Sentence Construction, perhaps because the instructions for this task were particularly short and simple.

These findings have far-reaching implications for the ability of dyslexic students to cope not merely with the volume of reading, but also turn-over of essays and other work, at university. Thus the reasonable adjustments (e.g. extra time in examinations) for disabled students, required by the Disability Discrimination Act, do not constitute an unfair advantage, as some people

argue, but are vital in allowing dyslexics to study without disadvantage compared to non-dyslexic students.

Conclusion

This explorative research described the design and piloting of a dyslexia screening test-prototype for HE students. Instead of operationalising a single definition of dyslexia, this study employed a wide-range of (deficit and enhanced abilities) theories to examine which tasks were effective in identifying dyslexic students. A number of promising avenues for further work were revealed: processing speed appears to be a far stronger indicator of dyslexia than absolute scores in the HE population, and complex tasks, tapping multiple deficits (thereby circumventing dyslexic students' coping strategies), tend to be more sensitive than tasks which involve a single area of deficit. These results offer valuable insights into the challenges of identifying dyslexia in high-performing adults and provide a strong foundation for further work to implement a computer-based screening test for dyslexia suitable for the HE population.

Acknowledgements

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Footnotes

[1]   The use of *'…with individuals evidencing unique profiles of strengths and weaknesses'* picks up on the International Dyslexia Association (1988) definition, which states that *'People with dyslexia are unique; each having individual strengths and weaknesses'.* The British Dyslexia Association definition (2003) refers to a range of specific, everyday difficulties, such as *'difficulties with sequences'*, reflected in the current definition's inclusion of: *'Other soft signs may include laterality discrimination and sequencing difficulties'*.

[2]   It is not possible to operationalise the theories exhaustively, as there is a limit to how much time participants can be asked to commit to the research.

[3]   Another Category 4 word identification task that can be viewed as operationalising the automatisation deficit theory (as opposed to the phonological deficit theory) requires participants to decide if a very briefly presented stimulus is a real word or a non-word. Category 5 includes a visual search task (participants must locate a given target in a display of distractors) and a mental rotation task (participants must rapidly decide whether or not a stimulus has been rotated).

4   Two sets of usability testing were carried out to: i) assess the functionality of the computer-based version (programmed in Flash Macromedia MX) of the tasks, ii) examine the effectiveness of the user interface, and iii) refine the tasks and individual task items with regard to issues such as wording of instructions, complexity, and time-limits. The first set of usability testing involved 13 non-dyslexic volunteers, while the second set involved 14 non-dyslexic and 4 dyslexic volunteers, recruited from among Cambridge University staff. On the basis of these data, an item analysis of all tasks was carried out and a number of individual items were excluded as ambiguous, confusing or of inappropriate complexity (i.e. all/no participants answered the item correctly). Minor refinements were also made to the user interface and the computer programme (e.g. an automatic cut-out function after multiple failures was added to progressive tasks such as digit span).

5   Block 1 was always administered first. Data from 39 participants was collected for Block 1 tasks. Only 11 (3 dyslexic, 2 potentially-dyslexics and 6 non-dyslexic) and 10 (1 dyslexic, 3 potentially-dyslexic and 6 non-dyslexic) participants, respectively, had completed Blocks 2 and 3 when the project ended. Therefore, as there was insufficient data to conduct any meaningful analyses – even exploratory ones – for Blocks 2 and 3, only Block 1 data was analysed in this paper.

6   The mean age for all groups (approximately 21 years) was representative of the University student population. The male to female ratio varied widely across the groups (for the university as a whole, the ratio is approximately 1:1). The 'type' of school a student attended before university can be viewed as a general measure of student's family's SES. Cambridge University accepts approximately 44% of its students from private and independent schools versus comprehensive and grammar schools; the dyslexic and potentially-dyslexic groups were roughly representative of the university population, though the data for non-dyslexics was skewed towards private and independent schools (i.e. indicating that these students came from families with high SES). The groups differed widely on the ratio of undergraduates to postgraduates. All students at Cambridge are expected to have at least three A's at A-level, indicating a very high level of academic achievement; this constitutes a reasonable measure of general cognitive ability, on which all groups were assumed to be equivalent. Beyond this, no further measures were taken to assess equivalence of academic and/or cognitive ability of participants; the number of undergraduates to postgraduates provides no further information about academic ability once it is considered that all the undergraduates were younger than the postgraduates. While approximately 19% of Cambridge students are from ethnic minorities, only two participants across all three testing groups gave an answer other than 'White'; therefore, the groups are approximately

equivalent on this criterion, though they are not representative of the university population as a whole.

[7]   It was considered unethical to provide participants with information about their performance during the pilot of the test prototype due to the fact that it was not possible to accurately or reliably explain the import of individual results.

[8]   Mid-point figures refer to the time (in seconds) which is mid-way between the mean time of the dyslexic and non-dyslexic groups, i.e. ($Mean_{dys}$ - $Mean_{nondys}$) / 2 + $Mean_{nondys}$. Times above the mid-point are closer to those of the dyslexic group than the non-dyslexic group. As standard deviations are large (probably due to the small sample sizes), using the mid-point gives a more effective measure of how similar a given time is to the dyslexic or non-dyslexic group than attempting to locate its position in standard deviations from either group.

Social Capital and Marine Resource Management in Kaledupa, Wakatobi Marine National Park

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ABSTRACT
Fisheries are currently declining at an alarming rate in the Wakatobi Marine National Park (WMNP). The use of destructive practices for reef fishing and other extractive purposes have continued through lack of management and collective reinforcement of rules. A co-management strategy would be the most cost-effective option, yet a high social capital base is necessary for the success of this method. Social capital was measured between 3 communities in the WMNP, which comprise of two ethnic groups: the Pulo and the Bajo, using a closed-ended questionnaire. Social capital was highest within communities and significantly variable between communities (Kruskal-Wallis: h=10.3, d.f.=2, P<0.01)[22]. Relations of trust were a major weakness in social capital between communities, where 66% of the Pulo had a low level of trust in the Bajo. This negative relationship was reinforced by the conduct of the Bajo in Pulo territories, poverty, and lack of communication and political representation of the Bajo people. Educating the two communities about equality and conservation using the established marine-resource groups and organisations such as the Forkani can facilitate the generation of social capital and improve social conditions for implementing a successful conservation management strategy.

Introduction

Coral reef ecosystems provide natural goods and livelihoods including fisheries, construction materials, tourism and biogenic compounds. Equally important are the non-use values of coral reefs: ecosystem services which include coastal protection, biogeochemical cycling and biodiversity. The social-economic welfare of hundreds of millions of people is dependent on these highly productive ecosystems and the global economic value of coral reefs has been estimated at around US$ 30 billion (Smith et al., 2007). The aims of coral reef management are to sustain coral reefs so that they can continue to provide ecosystem goods and services upon which humanity depends on. So far, such management strategies have failed to achieve these goals on both a regional and global scale (Bellwood et al., 2007). The Wakatobi Marine National Park (WMNP) is situated in the Tukang Besi archipelago in South East Sulawesi, Indonesia and comprises many high quality reef sites. Although it has a status of a Marine Protected Area (MPA), rules are seldom enforced and the communities living around the reef continue to use destructive practices such as Fyke nets and coral mining. In addition,

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[22] Kruskal-Wallis is a statistical test which analyses the variance between 3 or more groups of data, where h = the rank sum statistic, d.f. = degrees of freedom or number of variables (-1) and P = the significance value, whereby the probability of this result occurring by coincidence is 0.01 or 1%

general over-exploitation has led to reduced fish size, catches and potentially the collapse of the Kaledupan fishery (Coles, 2004).

Conservation management strategies are easier to implement in local groups that have a high degree of social connectedness. A cooperative society that exhibits altruistic behaviour and activities that are maintained by a collective decision have a more positive outcome on biodiversity than those with individualistic motives, which often lead to conflict of interests and can lead to degradation of natural resources (Pretty & Smith, 2004). This idea has been captured by the concept of social capital, which is a collective of underlying principles that aids cohesion, stability and cooperation in a community. Pretty & Smith (2004) have rationalized social capital through four attributing elements. Firstly, a relation of trust is an important foundation for building social capital, but is also strengthened as a result. The second element is reciprocity and exchanges, which could simply entail trading, through to reciprocation of selfless endeavours and sharing beneficial information. Thirdly, common rules, norms and sanctions are important for social understanding and engagement between the two communities. Finally, connectedness in networks and groups provides a platform for such engagement and a measure of social organisation within and between communities.

There are two major ethnic groups inhabiting Kaledupa and its coastal range: the Pulo (Kaledupans) and the Bajo, between which there are cultural and socio-political divisions. The conservation charity organisation Operation Wallacea have a research facility based on Hoga island and recognise this division as an impediment to implementing a successful conservation management strategy. These divisions are embedded in the history between the two communities, as the Bajo have individualistic attitudes and avoid social mixing with the "people from the land". Cultural differences in the Bajo are deeply rooted in their history of a sea-faring and nomadic existence, prior to forced settlement in the 1960s by the Indonesian government. At present, conflict is driven by differences in interest in the use of the MNP and the lack of political representation of the Bajo as the major stakeholders of marine resources (Fitzgerald, 2007), effectively rendering them second-class citizens. This divide between the two communities pose challenges in building social capital to implement a successful marine park management strategy.

The aim of this study is to determine the degree of social capital within and between local resource user communities in the Wakatobi MNP and the implications for marine park management.

The objectives are:

(i)   To assess social capital between the Bajo and Pulo communities by implementation of a questionnaire and semi-structured interview.

(ii)   Analyse the data using quantitative and qualitative methods and formulate a social capital index.

(iii)   Identify the strengths and weaknesses in the different areas of social capital in Kaledupa and discuss the implications for marine park management and potential strategies for improvement.

H_1: A higher level of social capital will be associated highly within rather than between communities and the driving force of this divide will be the differences between the Bajo and Kaledupan communities.

Methods

Sampling Location Profiles

The study was conducted between 4 villages situated on and around the island of Kaledupa in the WMNP (Fig. 1). The communities of Sampela, Ollo and Ambeua were used as experimental groups and Furake as the control group. Sampela (or Sama Bahari) is a Bajo settlement, situated a short distance offshore from Kaledupa and has a population estimated around 1300, of which the majority are women. The average wage in Sampela is less than 1 million Rupiah (RP) and over 95% of the population are marine-resource users, most commonly hook and line and net fishers. A second Bajo community, Mantigola, was within accessible proximity, however, excluded due to an issue of safety, endorsed by Operation Wallacea. Ollo and Ambeua are Pulo communities and have a collective population of 15000 on Kaledupa (Cullen et al., 2007). Both communities are considerably wealthier than Sampela, with the average wage over RP1 million. Most marine-resource users in Ollo are agar farmers but some have alternative incomes. Ambeua is the major and most developed town on Kaledupa, where most resource users are fishermen but nearly all have alternative incomes. Ollo and Ambeua were selected as they are representative of the diversity of occupational activity on Kaledupa and suitable for data collection in a study with such time constraints. Furake is an isolated Pulo community on Hoga Island, with a population of ~150. Most inhabitants are land farmers but some participate in fishing and agar farming. Furake was the most suitable control group due to their low rate of contact with other communities and widely-assumed social neutrality.
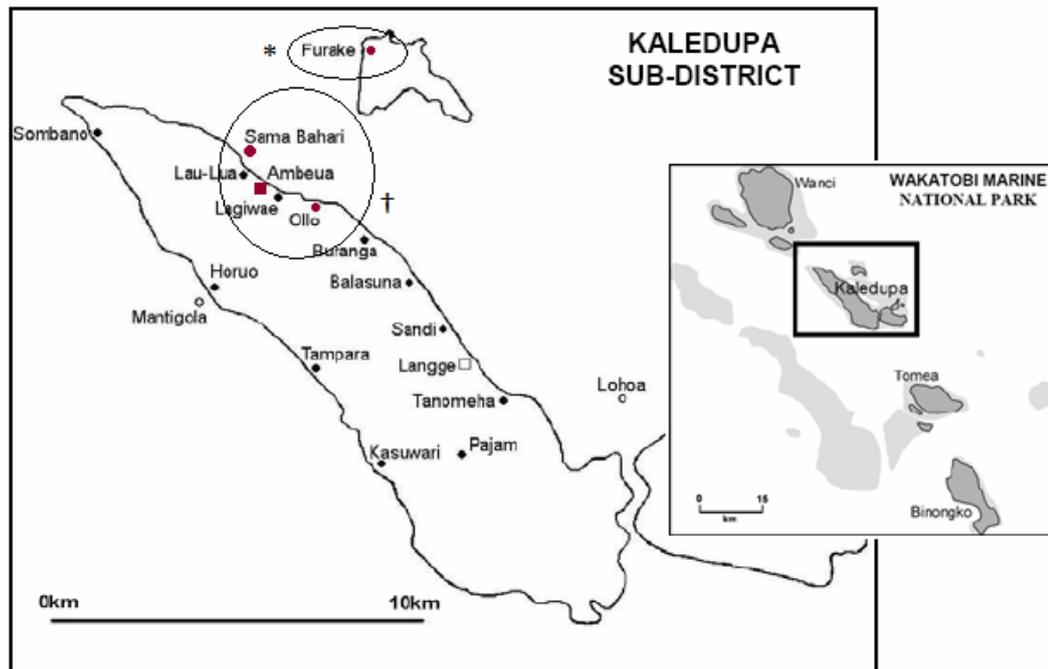
Figure 1: Location of the sampling sites: Sampela (Sama Bahari), Ollo, Ambeua (†=experimental samples) and Furake (*=control sample) and the position of Kaledupa in the Wakatobi Marine National Park, SE Sulawesi, Indonesia (inset). From Cullen (2007).

Sampling Strategy and Ethical Considerations

A total of 87 participants were interviewed within 5 days during April 2009, of which 30 were obtained each from Sampela and Ollo, 11 from Ambeua and 16 from Furake. A non-random sampling strategy was applied due to the target sample being a specific proportion of the community as a whole (marine resource users), constraints in time and participant availability. Permission sought from community leaders and a small sum of money (~US$ 1) was given as a token of gratitude from Operation Wallacea. Personal data were kept confidential.

Implementation

Social capital was measured between the four communities by method of a survey comprising a household data (e.g. income, occupation) and a questionnaire (Appendix 1) that was articulated to each participant via a translator, employed by Operation Wallacea. Closed-end questions, original to this study were designed and compiled for the questionnaire to quantify the four elements of social capital derived from Pretty and Smith (2003) in the context of marine resource-user communities. The respondents answered the questions on a 5-point Likert-scale (e.g. 1= strongly disagree, 5=strongly agree). An index of social capital was calculated from the participant scores given to each question. This method was used by Lochner et al. (1999) to measure social capital, using questions based on relations of trust within a neighbourhood and has been adopted for this study, but within a marine-resource user context. Qualitative information was also extracted in form of a semi-structured interview as an extension to the given responses in the questionnaire.

Data Interpretation and Statistical Analysis

The Likert-scale system allowed semi-quantitative analysis of the data acquired through the questionnaire. A social capital index was calculated for each community from the collective data, which were then broken down and analysed as a subset of questions. The data was statistically analysed to compare observed values (respondent scoring) to the expected values (assuming a specific distribution of data) using the Chi-squared goodness-of-fit test, to determine whether social capital scores are of significant value.

Results and Analysis

Social capital was higher within each community than between different communities (Fig. 2). The disparity in social capital was driven by poor inter-community relations, especially between the Bajo (Ollo and Ambeua) and Pulo (Sampela) communities, where social capital maintained between the Pulo communities and the Bajo community was significantly lower than the capital maintained between the Pulo communities alone (Kruskal-Wallis: h=10.3, d.f.=2, P<0.01)[23].

Social capital within communities
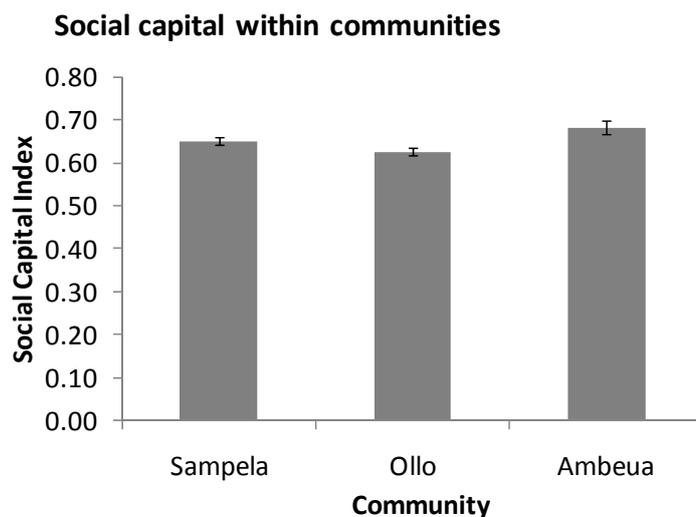
Figure 2: Social capital index was measured between individuals within each community: Sampela (n=30), Ollo (n=30) and Ambeua

The social capital index between the control (Furake) and the Bajo (Fig. 3) was lower than the scores conveyed toward their Kaledupan counterparts in Ollo and Ambeua (Fig. 4 and 5). The Bajo community (Sampela) attained lower-end scores from both Pulo communities.

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[23] Kruskal-Wallis is a statistical test which analyses the variance between 3 or more groups of data, where h = the rank sum statistic, d.f. = degrees of freedom or number of variables (-1) and P = the significance value, whereby the probability of this result occurring by coincidence is 0.01 or 1%

Social capital of Sampela
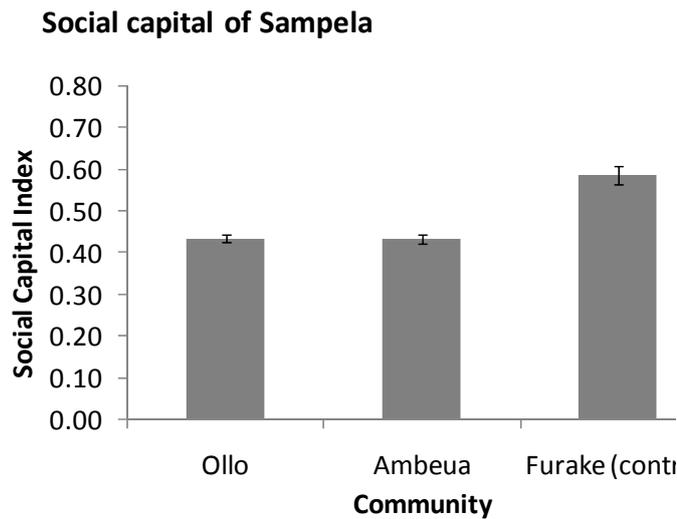
Figure 3: Social capital index between Sampela (n=30) and neighbouring communities: Ollo and Ambeua. The participating community (horizontal axis) each attribute a level of social capital (vertical axis) that they maintain with Sampela. Furake (n=16) is the negative control, giving only its opinion on the other communities.

Ollo and Ambeua exhibit higher social capital indices between each other, whereas the Bajo attributed particularly low social capital scores to both Ollo (Fig. 4) and Ambeua (Fig. 5).

Social capital of Ollo
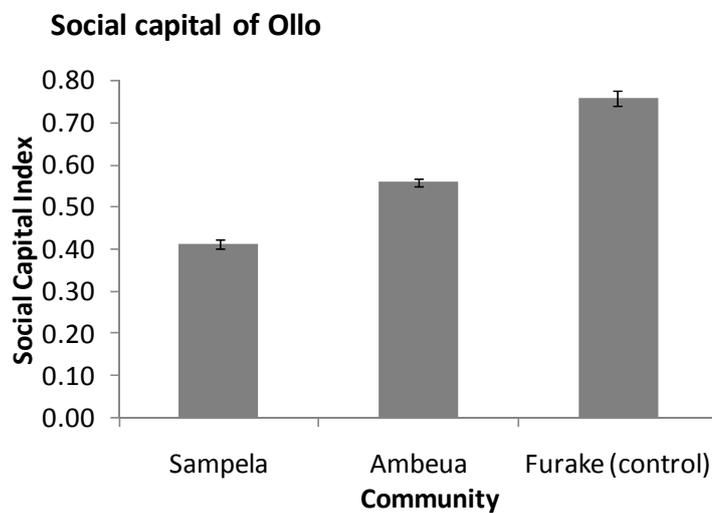
Figure 4: Social capital index between Ollo (n=30) and neighbouring communities: Sampela and Ambeua. The participating community (horizontal axis) each attribute a level of social capital (vertical axis) that they maintain with Ollo. Furake (n=16) is the negative control, giving only its opinion on the other communities.

Social capital of Ambeua
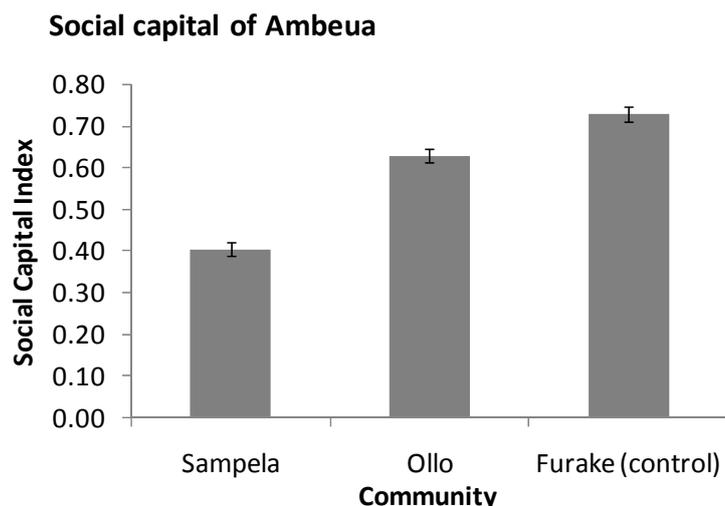
Figure 5: Social capital index between Ambeua (n=11) and neighbouring communities: Ollo and Sampela. The participating community (horizontal axis) each attribute a level of social capital (vertical axis) that they maintain with Ambeua. Furake (n=16) is the negative control, giving only its opinion on the other communities.

The social capital indexes were composed from participant response scores to questions concerning the four elements of social capital in the context of their own and neighbouring communities. Therefore, to facilitate an understanding of the differences in social capital scores, the four elements of social capital that comprise each score were analysed (Fig. 6, 7 and 8). The participant response to questions concerning trust was significantly variable between communities (X^2=110.4, d.f.=11, P<0.001)[24]. 66% of participants from Ollo and Ambeua exhibited low levels of trust in those from Sampela (Fig. 6c). When interviewed, the participants from Ollo accused the Bajo from Sampela of damaging their agar when using poison to catch lobster and octopus, breaking the agar lines for boat access and the stealing of agar and fish from bubu traps. Trust was highest within communities and between the villages of Ollo and Ambeua (Fig. 6b and c).
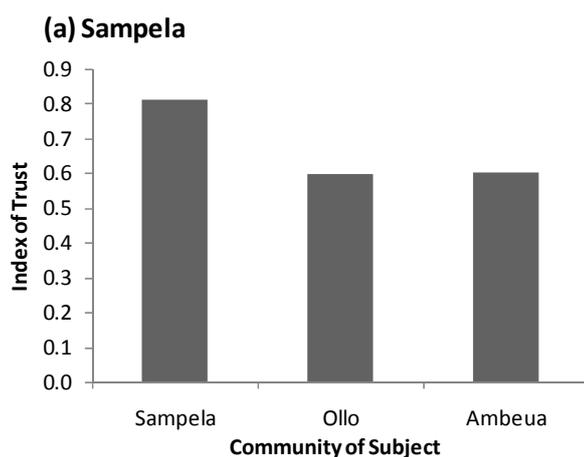
(a) Sampela

Figure 6: Indices of the social capital element: relations in trust measured within and between the communities **(a)** Sampela, **(b)** Ollo and **(c)** Ambeua. Each community (x-axis) attributed an index of trust (y-axis) to the community of subject.

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[24] Chi-squared distribution is used in this case as a test for the goodness of fit between the distribution of data from observed variables (participant response) and a theoretical distribution (assuming scores between each community are equal). X^2= the chi-squared statistic, d.f.= degrees of freedom and P= the significance value.

(b) Ollo
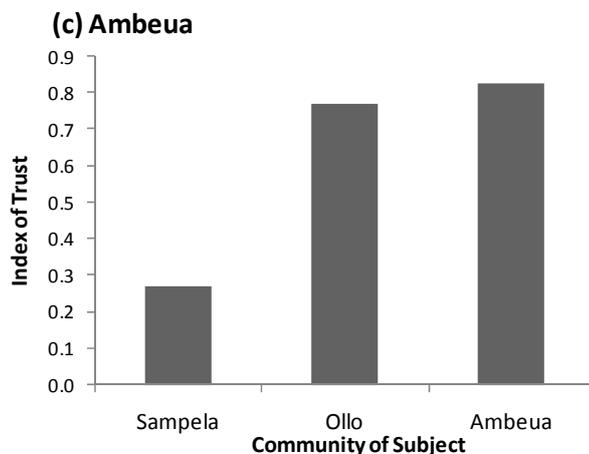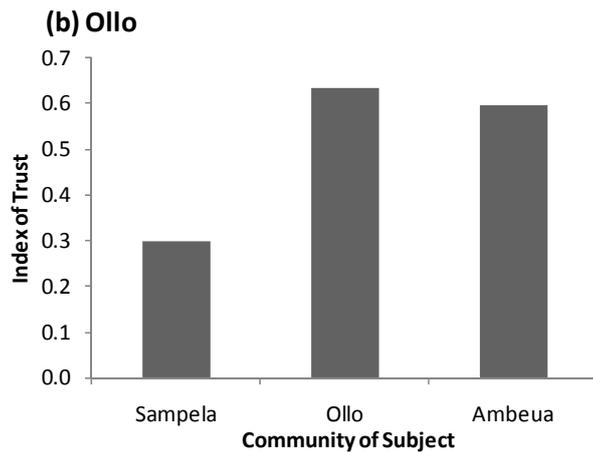
(c) Ambeua

The scores in reciprocity were the highest of the four elements of social capital (Fig. 7), mainly reinforced by the activities of trading, where people from Sampela, Ollo and Ambeua trade with each other at least weekly. Inter-community variation in participant response to questions relating to reciprocity was significant (X^2=53.3, d.f.=11, P<0.01) due to low willingness to exchange information between the Bajo and Pulo communities.
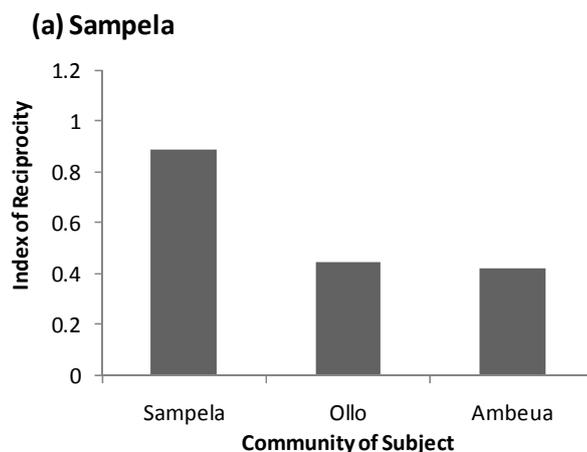
(a) Sampela

Figure 7: Indices of the social capital element: reciprocity and exchanges, measured within and between the communities **(a)** Sampela, **(b)** Ollo and **(c)** Ambeua. Each community (x-axis) attributed an index of reciprocity and exchanges (y-axis) to the community of subject.

(b) Ollo

(c) Ambeua
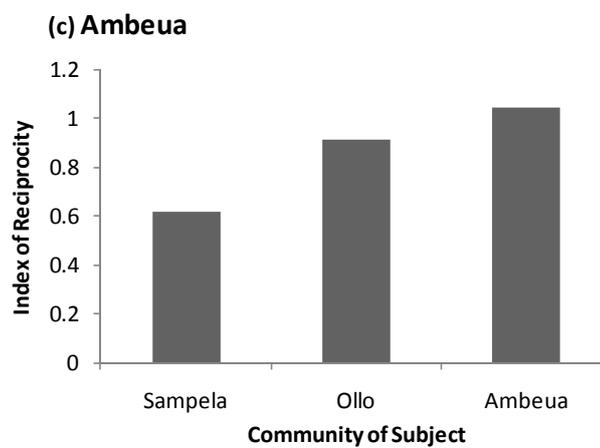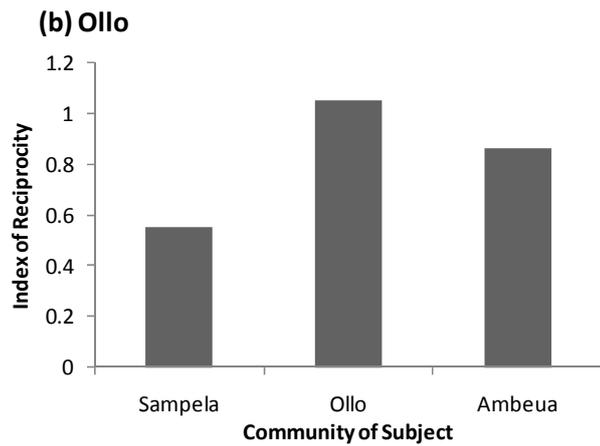
There was a moderate relatedness between communities in social norms regarding sustainable fishing practice and the rules of the marine park (Fig. 8), especially where many participants believed sanctions should be enforced for breaking marine park rules.
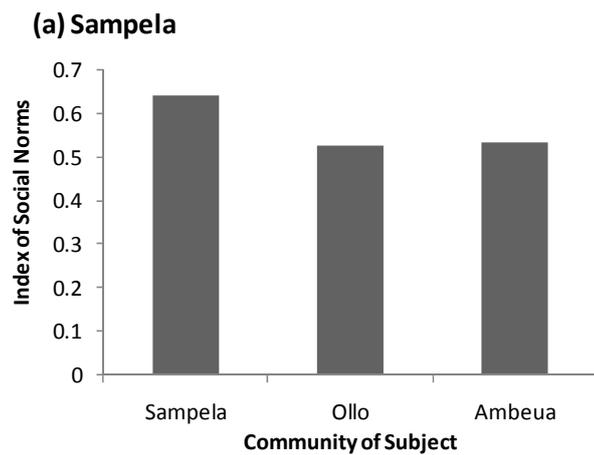
(a) Sampela

Figure 8: Indices of the social capital element: social norms rules and sanctions measured within and between the communities **(a)** Sampela, **(b)** Ollo and **(c)** Ambeua. Each community (x-axis) attributed an index of trust/reciprocity or relatedness in social norms (y-axis) to the community of subject.

(b) Ollo
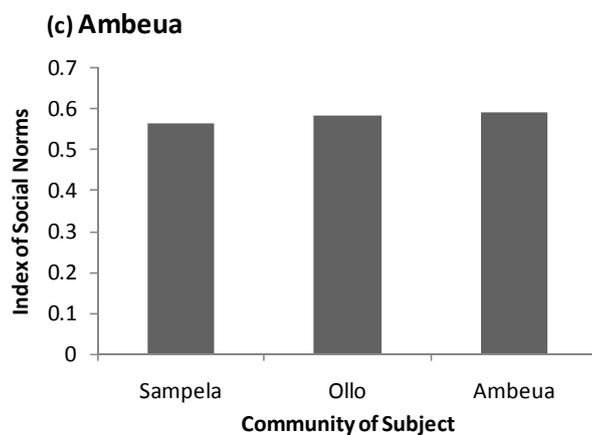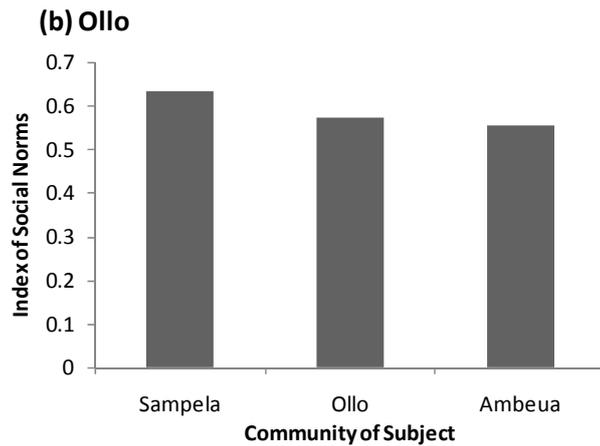
(c) Ambeua

Connectedness through groups and organisations was most substantial in Ambeua. The majority of the sampled population belonged to at least one organisation (Fig. 9) and there was a significantly positive correlation between the levels of trust that each participant held for other members of their own community and their interactions through social networking ($F_{1,3}=26.05$, $P<0.05$, $R=0.89$)[25]. Ambeua also exhibited the highest inter-community group activity, where many of the national (e.g. women's groups) and international organisations were based. Few of these were marine related, but most notable were Forkani and Jalal Wakatobi (Table 1). Ollo exhibited a variety of groups and organisations, comprising numerous marine-based groups (particularly those concerning agar farmers). These groups were highly organised and were strongly recognised throughout the community. Conversely, marine-related groups in Sampela were mainly family-based enterprise, most of which did not even retain a name and, with exception of Furake exhibited the lowest level of affiliation with groups and organisations (Fig. 9).

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[25] Linear regression was used to analyse the relationship between two variables (responses to questions relating to trust and questions relating to connectedness through groups and organisations). P= significance value and R= regression value, where values above 0.75 indicate a strong, positive relationship.

Percentage of community members belonging to groups and organisations
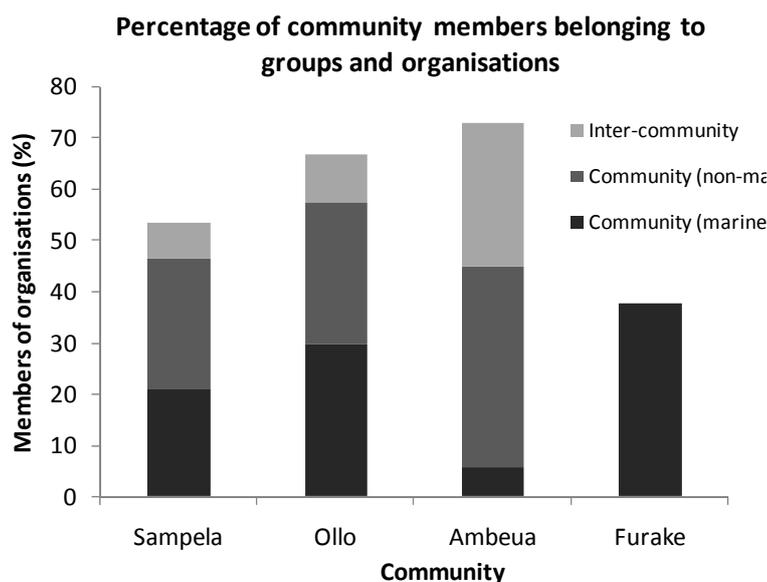
Figure 9: Connected-ness between communities through groups and organisations. The importance of groups and organisations to each community is measured through the percentage of affiliated participants. These comprise of inter-community ( ) and intra-community organisations which are either marine ( ) or non-marine related ( ).

Table 1: Organisations and societies and their level of establishment (lateral connectedness) within the Wakatobi MNP.

Organisation/Society	Type	Level of Establishment
Agar kolompot (Sampela)	Marine user: agar	Community
Darma wanita	Women's group (civil servants)	National
Darwin Initiative	Conservation NGO (DEFRA funded)	International
Dasa Wismah	Women's group	National
Football	Sports club	Inter-community
Forkani	NGO	National
Jalal Wakatobi	Fisherman's link	Inter-community
Karang taruna	Headman's committee	Community
La Hama (Ollo)	Marine user: predominant agar	Community
Net fishing kolompot (Sampela, Ollo)	Marine user: net fishing	Community
Pesma (Ollo)	Marine user: agar/watchdog	Community
Petani agar (Ollo)	Marine user: agar	Community
PKK	Family welfare programme	National
Rongpong kolompot (Sampela)	Marine user: rongpong shareholders	Community
Volleyball	Sports club	Inter-community
Yastita	Japanese NGO	International

Finally, there was a large discrepancy in wealth between the Bajo and the Pulo communities, whereby 83% Bajo earned less than RP 1 million and 69% of the Pulo from Ollo earned more than this. Nonetheless, there was no significant correlation between wealth and social capital between communities. High variability in participant response is reflected in the social capital scores (Fig.10) and could only be attributable to individual preconceptions or bias, where for example, some participants trust their Bajo neighbours, whereas others exhibit complete distrust.

Range in Participant Response
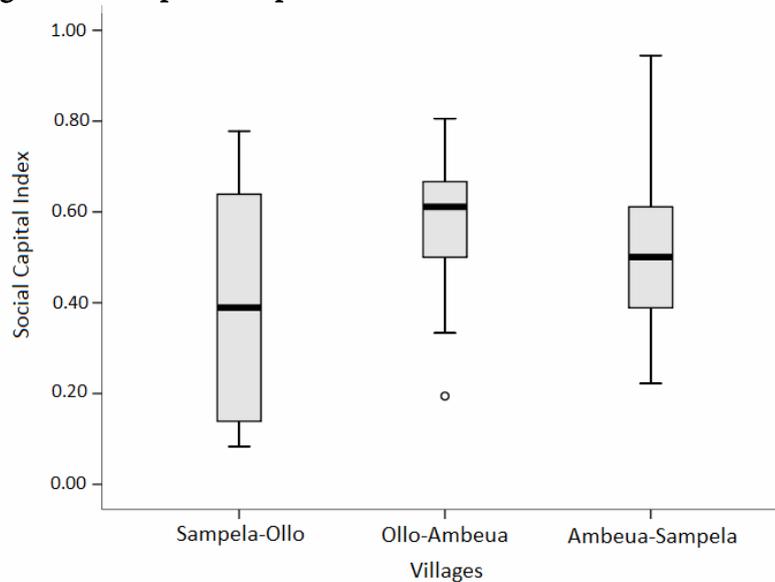
Figure 10: The average social capital between villages (black horizontal line). The inter-quartile range (grey box) is where 50% of the participant response distribution lies in relation to the median value. The highest and lowest values (or participant response range) are represented by the error

Discussion

The current status of social capital in Kaledupa is not an entirely negative result and there are key areas such as reciprocity through trade that are quite strong between communities, whereas other elements, notably, relations of trust are weak and could be developed for the benefit of marine park conservation. Trust is by far the most variable element of social capital between the communities. This is mainly due to cultural and socio- political divisions between the two ethnic groups (Fitzgerald, 2007), exacerbated by unsustainable practices such as coral mining by the Bajo and use of fish fences by the Pulo. The reporting of Bajo individuals using illegal poison fishing techniques and causing damage to agar farmers' property was a common cause of contempt from the Pulo. Trust facilitates cooperation and can create social obligation to conform to marine park rules, reducing costs in monitoring (Pretty and Smith, 2004), therefore it is essential to develop relations of trust for collective management strategies.

Intra-community scores on reciprocity were high compared to trust, which was mainly due to activities in trading. Chan (2002) observed that trading in the marketplace is the only communicative interaction the Bajo has with the

Pulo, and that there are no formal channels of dialogue. This is not the present day situation, as the Bajo community is included in the Fishermans link organisation Jalal Wakatobi; yet, it is true on a social level. Most Sampelans asserted that they would not share information or local knowledge with the Pulo and vice versa, as the Bajo are considered by Pulo as competition for the resources.

The sharing of common rules, norms and sanctions between communities can be essential for long-term implementation of marine park rules. Creating new social norms can cognitively reinforce rules even when the financial or other incentives to comply diminish (Pretty & Smith, 2004). Social norms have been established in many Western societies, such as recycling, which have been reinforced through government and NGO campaigns and messages in the media (Monroe, 2003). Although many people from all communities would not act if they witnessed another user breaking the park rule, the majority of participants from all communities agreed that sanctions should be imposed for rule-breakers, providing scope for the introduction of common-rules and sanctions that could be implicated on a self-management level. Many participants from Ollo and Ambeua recognised that sustainable resource management is embedded in the culture of the Bajo, even though it is rarely recognised in their own.

The Bajo community in Sampela rely mostly on fishing practices to sustain themselves, whereas many Pulo, especially in Ambeua have multiple income streams including land-farming, trading and civil servant jobs. It is therefore important for the local government to recognise the Bajo as major stakeholders, as the most marine-resource dependent group and increase the inclusiveness of the community in the implementation and monitoring of the MPA management strategy. Furthermore, the Bajo are a potentially valuable asset to conservation management, as they maintain a high ecological knowledge, including the identification of fish species, their spawning sites, life cycles and migration patterns utilised in traditional fishing practice (Cullen et al., 2007). Although the Bajo commit offences, their concern for fish stocks and interest for resource management indicates their potential for becoming actively involved in resource management (Clifton, 2003).

Connectedness between communities is reinforced by 3 types of social capital: bonding, which creates links with people of similar outlooks (within community), bridging, which expands those links to others with different views (e.g. Bajo and Pulo) and linking, which enables groups to engage externally with outside agents, such as NGOs (Pretty & Smith, 2004). Groups and organisations play an important role in connectedness and their activities have high potential for conserving the environment. Local landcare groups in the Philippines mobilised conservation farming through building social capital by identifying the needs of the local people and organising activities. The success of these groups is facilitated by incentives (e.g. bursaries) for compliance and penalties (e.g. fines) for defaulting against the

rules (Cramb & Culasero, 2004). There are numerous organised groups in the Wakatobi MNP, both marine-resource and non-marine related, including Jalal Wakatobi and Forkani, among many agar kolompots (groups) and fishermen's guilds. The Forkani's role within the community is to find the aspirations and opinions of locals and to educate and inform them in marine conservation and policy. This organisation is important for building bridging and linking social capital with higher organisations. Other groups such as the volleyball clubs could also enhance bonding and bridging social capital, as an interface in which the Bajo and the Pulo can interact. Many of the marine-related organisations in Sampela did not go beyond the boundaries of family enterprise and therefore have less potential in their ability to construct social networks and could compromise the value of their social capital score through connectedness. Furthermore, the Bajo often ignore information passed on from their representative for Forkani, Mr Rustam. Such issues of social integrity within the Bajo to act as a community rather than individualistically are important to address.

Social capital will not always necessarily favour the facilitation of conservation, as people can become more organised in order to exploit a natural resource more effectively (Pretty & Smith, 2004). Thus, it is increasingly clear that the role of local government, NGOs (e.g. Forkani) and groups such as Operation Wallacea is vital in providing guidance to the local marine-user groups. This study also reveals the potential ability in the use of social capital analyses as a monitoring strategy to assess the progress in relationship status between the communities and impact of such interventions from external bodies.

Conclusions

To our knowledge, this was the first study where social capital has been quantified in marine-resource stakeholder communities. The development of social capital is essential for the success of marine resource management and this investigation confirmed that there is currently a low degree of social capital between the Bajo and Pulo communities, which is complicated and confounded by a history of socio-political differences between the two ethnic groups. This study also maintains that there is a large gap in wealth and social status between the Pulo and the Bajo people, where poverty and inequality is an underlying problem that requires further attention.

Furake is an isolated community of Pulo islanders, who have little contact with surrounding communities yet exhibit some bias against Sampelans. With the exception of Sampela itself, both the control and experimental community groups exhibit social disagreement towards the Bajo ethnic group. Trust is a major shortfall in the social capital between the two peoples, where the Bajo are witnessed committing offences, lack in communication and transparency with the Pulo. Conversely, the Pulo

exhibit some degree of prejudice against the Bajo and utilise their greater political representation against the Bajo. Reciprocity between the Pulo and the Bajo rarely extends beyond the customs of trading, where communities do not often share information or give help to one another, regarding each other as competition for resources. The use of the established organisations including the fisherman's' link Jalal Wakatobi could be essential for improving social capital as they provide a platform of dialogue and could encourage positive interactions between communities. Conversely, each community shared some common ideals in the management of marine resources including the enforcement of penalties for the contravention of marine park rules. Marine Park rules are currently sanctioned by local government and are ineffective due to lack of surveillance. The role of marine park rule enforcement could be given to an elected local body from each community, which may also benefit reinforcement of inclusiveness and a sense of shared responsibility. Furthermore, the Bajo's knowledge of the ecosystem could be utilised to benefit marine conservation management strategy.

Finally, improvements in social capital could be facilitated through educating both communities in a multi-cultural background about inclusiveness and participation in marine park conservation management and advice from Operation Wallacea communicated through the NGO Forkani. The identification of potential Bajo representatives for these groups will also benefit conservation management and bring both communities closer to reaching these goals.

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Appendices

Appendix I: Questionnaire

Questionnaire

1. What is your name? (optional)

2. Which village are you from?   Sampela ☐   Ambeua ☐   Ollo ☐

3. What is your gender?   Male ☐   Female ☐

4. How old are you?   ☐

5. How many people live in your household?   ☐

6. What is your occupation?   Traditional reef fisher (hook & line/speargun/gleaning) ☐

   Net fisher ☐   Rompong fisher ☐   Fish fence fisher ☐

   Fish farmer (aquaculture) ☐   Agar farmer ☐   Land farmer ☐

   None ☐   Other (please specify) ☐

7. What is your income per month?   < 500,000 rp ☐   500,000 < 1 million rp ☐

   1 million < 1.5 million rp ☐   1.5 million < 2 million rp ☐   = 2 million rp ☐

8. How much do you trust people from the following villages?

	Not at all	Not very much	Indifferent	Very much	Completely
Sampela					
Ollo					
Ambeua					

9. How comfortable would you feel about lending your fishing / farming gear / equipment to somebody from one of the following villages?

	Not at all comfortable	Not very comfortable	Indifferent	Quite comfortable	Very comfortable
Sampela					
Ollo					
Ambeua					

10. How comfortable would you feel if somebody from one of the following villages utilised your fishing / farming area without asking?

	Not at all comfortable	Not very comfortable	Indifferent	Quite comfortable	Very comfortable
Sampela					
Ollo					
Ambeua					

11. If you do somebody a good turn from one of the following villages, how likely are they to return the favour?

	Not at all likely	Not very likely	Perhaps	Very likely	Definitely likely
Sampela					
Ollo					
Ambeua					

12. How often do you trade your goods with members of the following communities?

	Never	Annually	Monthly	Weekly	Daily
Sampela					
Ollo					
Ambeua					

13. How likely are you to share information e.g. good fishing sites or new productive techniques, with members of the following communities?

	Not at all likely	Not very likely	Perhaps	Very likely	Definitely likely
Sampela					
Ollo					
Ambeua					

14. How strictly do you think regulations of the Wakatobi Marine National Park are adhered to by members of the following communities?

	Not at all strictly	Not very strictly	Do not know	Quite strictly	Very strictly
Sampela					
Ollo					
Ambeua					

15. In what way do you think the following communities react towards a member of their own community violating the rules of the Wakatobi Marine National Park?

	No reaction	Very little	Do not	Verbal	Report to

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		reaction	know	warning	police / officials
Sampela					
Ollo					
Ambeua					

16. At what level is the concept of sustainable marine resource use embedded within the culture and society 'way of thinking' within the following communities?

	Not at all	Very little	Do not know	Quite a lot	Deeply embedded / central
Sampela					
Ollo					
Ambeua					

17. Do you belong to any marine resource use / management related groups or societies within your own community?　　　Yes ☐　　　　No ☐

18. If you answered YES to question 17, what is the name of the group and what do they do?

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19. Do you belong to any non-marine resource use related groups or societies within your own community (e.g. sports)?　　Yes ☐　　No ☐

20. If you answered YES to question 18, what is the name of the group and what do they do?

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21. Do you belong to any groups or societies (marine or non-marine resource use related) outside of your own community?　　Yes ☐　　　　No ☐

22. If you answered YES to question 19, what is the name of the group and what do they do?

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23. To what extent do you trust Operation Wallacea?

Not at all	Very little	Indifferent	Quite a lot	Completely