'We Do Not Seem to Have a Theory…The Theory I Present Here Attempts to Fill This Gap': Inclusive and Exclusive Pronouns in Academic Writing

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This paper is a qualitative and quantitative corpus-based study of how academic writers use the personal pronouns **I** and inclusive and exclusive **we**. Using a multidisciplinary corpus comprising of journal research articles (RAs) from the fields of Business and Management, Computing Science, Economics, and Physics, I present data extracts which reveal how **I** and **we** can help writers create a sense of newsworthiness and novelty about their work, showing how they are plugging disciplinary knowledge gaps. Inclusive pronouns can act as positive politeness devices by describing and/or critiquing common disciplinary practices, and elaborating arguments on behalf of the community. They can also organize the text for the reader, and highlight the current problems and subject areas which preoccupy the field. The quantitative analysis reveals that while all instances of **we** in the Business and Management articles and all but one of the instances of **we** in the Economics articles are inclusive, only a third of the instances in the Computing articles and under 10 per cent of the instances in the Physics articles are inclusive. The study ends with a brief discussion of what a few English for Academic Purposes (EAP) textbooks tell students about inclusive and exclusive pronouns, and offers some suggestions for EAP classroom activities.

1. INTRODUCTION

This paper is a corpus-based study of how and for what purposes journal writers in four disciplines use the personal pronouns *I* and inclusive and exclusive *we*. While *inclusive we* refers to the writer and reader together, *exclusive we* refers solely to the writer and other persons associated with the writer. After reviewing other corpus-based studies of *I* and *we* in academic prose, which show that personal pronouns fulfil a number of pragmatic functions, I focus on what has been said about inclusive and exclusive pronouns in particular. I then offer my own analysis, outlining the procedure and methodology behind the construction of my corpus of academic articles, before describing a number of effects the pronouns help to create and illustrating these with extracts from my data. I end with a section on the pedagogical implications of my findings.

2. PERSONAL PRONOUNS IN ACADEMIC WRITING

A number of corpus-based studies have identified a range of functions that *I* and *we* can play in academic writing (e.g. Bernhardt 1985; Vassileva 1998; Kuo 1999; Tang and John 1999; Hyland 2001, 2002a; Harwood 2003, 2005a). Pronouns are said to help the writer organize the text and guide the reader through the argument (e.g. *First I will discuss x and then y*), state personal opinions and knowledge claims (*On the basis of my data I would claim*), recount experimental procedure and methodology (*We interviewed 60 subjects over the space of several months*), and acknowledge funding bodies, institutions, and individuals that contributed to the study in some way (*I thank Professor X for his help with the calculations*). In addition to performing this range of pragmatic acts, personal pronouns can help to reveal how academic writers construct their relationship with readers and with their discourse community (Kuo 1999). Thus while some uses of *I* and *we* are said to be low-risk, discrete instances of textual authorial intervention, other uses, such as when the writer makes a claim, carry much greater threat to face, and are potentially points at which the writer exposes themself to attack by the audience. Hence those who have constructed functional pronoun taxonomies (Ivanič 1998; Tang and John 1999; Hyland 2002a) link pronoun functions with authorial presence. The visibility of the writer in their text will therefore depend upon the function of the pronoun in each particular case. Consequently, researchers argue that inclusive pronouns are low-risk examples of intervention. Tang and John (1999), for example, posit the first person taxonomy shown in Figure 1.

Although Tang and John's taxonomy was constructed on the basis of an analysis of student writing, Harwood's (2003) taxonomy, which is based on analyses of both journal writing and student writing, looks fairly similar. What Tang and John classify as the 'I' as Representative category normally takes the form of *we* or *us*, being a generic use, used 'as a proxy for a larger group of people' (1999: S27). In other words, cases of inclusive *we* fall into this category. Authorial presence is low, as the writer effaces themself from the text:

> Used this way, the first person pronoun, far from giving the reader information about the writer, effectively reduces the writer to a non-entity. Therefore, in terms of the potential power wielded by an authorial presence, this is the least powerful role that the first person pronoun can front. (Tang and John 1999: S27)

The most face-threatening categories of the first person, such as Tang and John's 'I' as Opinion-Holder and 'I' as Originator, normally use exclusive rather than inclusive pronouns. Tang and John say of their Originator category that it

> involves the writer's conception of the ideas or knowledge claims which are advanced. . . . Crucially, it calls for the writer to present

No 'I'	'I' as representative	'I' as guide	'I' as architect	'I' as recounter of research process	'I' as opinion-holder	'I' as originator

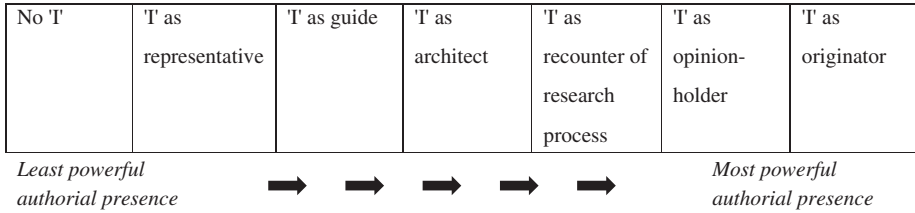*Least powerful authorial presence* ➡ ➡ ➡ ➡ ➡ *Most powerful authorial presence*

Figure 1: Tang and John's first person functional taxonomy (1999: S29)

> or signal these as *new*.... [W]hat is important is that the writers 'claim authority' and exhibit some form of ownership of the content of their writing, showing that they perceive themselves as people who have the *right* and the *ability* to originate new ideas (Tang and John 1999: S29)

Tang and John place the following extracts in this category:

> To *me* the phrase embodies the whole evolution process of the language to its present day status.

> Part of the impetus here is, as *I* see it, to place writing in a larger context and to highlight it as a social activity.

> *My* idea rested on the assumption that at each of these stages students face different problems, and that their success in solving these problems need to be measured separately if they are to develop as writers. (S37, 38)

I now begin to focus on inclusive pronouns in more detail, outlining some of the problems involved in distinguishing between exclusive and inclusive uses, before identifying a number of functions inclusive uses play in academic prose.

2.1 The fuzziness of the exclusive/inclusive divide

Unlike some other languages (e.g. Tok Pisin), English does not differentiate formally between exclusive and inclusive *we*, the only (partial) exception being the imperative *let's*, which indicates an inclusive use, while *let us* is sometimes inclusive, but often exclusive (Quirk *et al.* 1985; Wales 1996). Although this lack of semantic distinction is frustrating for the analyst, researchers claim it can be exploited by writers. According to Wales (1996: 58), it makes for 'a useful ambivalence politically speaking', while Pennycook (1994) argues that the selection and use of pronouns can reflect power relations.

The reason the exclusive/inclusive ambivalence can be politically advantageous for the writer is that they can move between exclusive and inclusive uses, sometimes even in the same sentence, to achieve a

number of effects. A single-authored extract from Biber *et al.*'s (1999) written academic corpus is an interesting illustration of this:

> If **we** are tempted to choose conventionalism on the ground that it provides an acceptable strategy for reaching the most sufficient balance between certainty and flexibility, then **we** should choose pragmatism, which seems a far better strategy, instead. **We** can summarize. In the earlier part of this chapter **I** have argued . . . (Biber *et al.*, 1999: 330)

As Biber *et al.* point out, the first two instances of *we* are unambiguously inclusive. However, given that the third *we* is juxtaposed with *I*, this *we* would be expected to be inclusive. Yet it is the writer who is summarizing, rather than both writer and reader, 'suggesting that both *we* and *I* refer to the writer excluding the reader' (Biber *et al.* 1999: 330). In other words, both are apparently exclusive, leading Biber *et al.* (1999) to argue that this apparent inconsistency in pronoun selection means that researchers sometimes create unintended effects by moving between inclusive and exclusive functions. However, an alternative interpretation is that the writer is exploiting the exclusive/inclusive ambiguity for their own ends. Although it is the writer alone who is summarizing, rather than the writer and reader in tandem, *we* could be seen to be deliberately chosen for its inclusive associations over *I*, which is exclusive by definition. According to this interpretation, the writer is therefore using inclusive pronouns to make the reader feel involved. And this (simulated) involvement will hopefully make the reader more receptive to the writer's claims for rhetorical effect. This function of inclusive pronouns is discussed more fully in the next section.

2.2 Inclusive pronouns and communality

Inclusive *we* personalizes the text, helping the writer construct a 'chummy', 'intimate' tone (Wales 1996), forming a bond between writer and reader (Mühlhäusler and Harré 1990). Inclusive pronouns construct audience involvement by indicating that the argument of the text is being built up by a collaborative writer/reader effort (Wales 1980), ensuring the reader feels they are part of a 'joint enterprise' (Quirk *et al.* 1985: 350). The writer uses inclusive *we* to transmit the message that 'You and I think alike' to the readership. Assuming that their message is accepted by the audience (remembering of course that readers can resist the writer's appeals), the writer can then speak on the audience's behalf: 'like a Greek chorus, a group with a collective identity can speak as if it is one speaker' (Wales 1996: 59). Crismore and Farnsworth (1989) identify a similar effect of inclusive *we* in their analysis of Charles Darwin's prose. They claim Darwin's inclusive *we* unites the author and his readers in a common quest for scientific truths. Communal pronouns thus indicate the existence of 'a set of mutual,

discipline-identifying understandings' (Hyland 2001: 559). Two of Hyland's (2001) researcher informants confirm how the use of *we* in their academic prose can bring writer and readers together:

> I often use 'we' to include readers. I suppose it brings out something of the collective endeavour, what we all know and want to accomplish. (Interview with Marketing researcher)

> it helps to locate you in a network. It shows that you are just doing and thinking what they might do and think. (Interview with Sociology researcher) (Hyland 2001: 560)

In other words, inclusive *I* and *we* help the writer construct dialogism between themselves and the audience by establishing the presence of the readership in the text, making the discourse reciprocal, to use Nystrand's (1989) term, or interactional, to use Thompson and Thetela's (1995). This effort to involve the readership can therefore be seen as a manifestation of positive politeness. By referring to the reader, and by crediting them with (imaginary) intelligent questions or observations, the writer apparently transmits communality and positive politeness by acknowledging the audience as disciplinary equals: in one of Hyland's researcher informant's words, the writer is 'getting [their] readers onside' (Hyland 2001: 559). However, a more cynical take on strategies such as these is given below.

2.3 Rhetoricity or manipulation? exclusive and inclusive pronouns as persuaders

As Hyland (2001) points out, while the inclusion of imaginary questions and objections posed by an imaginary readership undoubtedly adds a dialogic, positively polite element to the research article (RA), it also serves rhetorical ends. The ultimate aim of the writer is, after all, to secure ratification for their claims (Gilbert 1977; Latour 1987); and so one of the writer's motivations for inserting the readers' anticipated objections, questions, or concerns into the discourse will be to enhance the persuasiveness of the text. The writer will be trying to get the readers to see things their way, and to accept their hypotheses. Note how in the following example the pronoun appears to address the audience's concerns solicitously—but, with the help of the cotext ('understand', 'notice') also simultaneously directs attention to what the writer wishes to focus on:

> Why does the capacitance behave this way? To understand we first notice that at large B there are regular and nearly equal-shaped peaks in both C3,(B) and C31(-B). (Physics RA) (Hyland 2001: 570)

There is a sense in which attention to the audience's concerns can only ever be cosmetic: it is the writer who is responsible for inserting these imaginary

concerns into the text, and for setting the agenda of what is to be discussed (Wales 1996). In other words, it is the writer-constructed reader-in-the-text (Thompson and Thetela 1995), not the real reader, who is shaping the discourse. To use Hyland's (2001: 560) metaphor, while the text is a shared journey of exploration for both reader and writer, it is always the writer who is leading the expedition.

Research on how inclusive pronouns mask an unequal distribution of power has been carried out on spoken as well as on written discourse, specifically on doctor/patient exchanges. For instance, Quirk *et al.* (1985: 350) point out that doctors' use of inclusive pronouns (*How are we today?*) can be taken as condescending, since the inclusive *we* in fact refers to the patient alone (*you*), and is therefore once again cosmetic. And in a recent analysis of doctor/patient exchanges that appears in a medical journal, Skelton *et al.* (2002) confirm that inclusive pronouns are often used by doctors in an attempt to 'promote a patient-centred atmosphere', to promote a spirit of partnership in which the doctor reassures the patient that 'we will work together to solve the problem' (pp. 484–5). However, the apparent superficiality of any inclusion and collaboration between the participants is illustrated by the doctors' frequent use of the phrase *What I think we'll do* in Skelton *et al.*'s corpus. Despite the nominal inclusivity, it is the doctor who is taking charge here.

2.4 Negative politeness strategies: exclusive and inclusive pronouns and the protection of face

Whereas 2.2 showed how pronouns can be seen to construct positive politeness, they can also be seen as negative politeness devices. The effect of inclusive *we* in particular can be to diminish writer responsibility for an imperfect state of affairs. Mühlhäusler and Harré (1990: 175) use the following examples as an illustration of this effect:

> We know something about why crystals branch out into networks.

> We have not fully understood the medical implications of snuff-taking.

Inclusive *we* spreads any culpability for the lack of knowledge across the entire discourse community.

Another way writers minimize the threat to the face of the readership is by using inclusive pronouns when making a criticism. This is done to try to ensure the face-threatening act (FTA) to the audience is not so great as to prevent the writer's claims being considered and ratified. Myers' (1989: 7) quotation from Crick's (1979) paper illustrates the point:

> Lacking evidence we had become overconfident in the generality of some of our basic ideas.

Myers argues that the FTA is minimized by the lack of specificity of the criticism. Targeting a specific group of researchers or individuals would have been far more risky.

Finally, an FTA can be mitigated by the use of exclusive pronouns. As Markkanen and Schröder (1992) suggest, *I* can constitute a hedge (on hedges, see also Dubois 1987; Prince *et al.* 1982; Salager-Meyer 1994, 1997; Hyland 1998). *I* can show that, while the *writer* is persuaded of a certain point of view (e.g. *I think* ..., *I feel* ...), they leave it to the *readers* to determine whether or not the claim is justified. An equivalent phrase which used an inclusive rather than an exclusive pronoun (like *we believe*) could be seen as more face-threatening, since it seems to assume the readership's position is equivalent to that of the writer.

Having reviewed the literature on inclusive and exclusive pronouns and related it to academic writing, I now go on to provide a methodological and procedural description of the present study.

3. METHODOLOGY: CORPUS AND PROCEDURE

3.1 Analysing a disciplinary spread

To ensure that texts were analysed from a spread of subjects across the academy, Becher's (1989) taxonomy of the disciplines was used to decide corpus content. Becher divides the academy into soft and hard fields. To make a crude generalization, when we speak of the hard fields we are referring to the sciences, and when we speak of the soft fields we are referring to the humanities and social sciences. The soft and hard fields are then further divided into pure and applied groupings. Very broadly, the pure fields can be said to be more 'reflective' and theoretical, while the applied fields are 'active' and practical. While Becher (1989, 1994) concedes that taxonomies such as these simplify what are in fact innumerable disciplinary differences, such classifications are meant to be illustrative rather than watertight, and can foreground important disciplinary similarities and differences that might have otherwise gone undetected. It was decided that the corpus would consist of four different disciplines, one from each of Becher's categories. Hence my corpus represents the disciplinary spectrum as shown in Table 1.

3.2 Selecting the journals and the texts

Having selected the disciplines to be included in the corpus, the next stage was to select the journals from which the RAs would be chosen. A minimum of three lecturers at British universities in the four disciplines concerned were asked to nominate the three most prestigious journals in their discipline, and the two most popular nominations were chosen.[1] Where there was no clear consensus, more lecturers were asked to

Table 1: The four disciplines represented in the corpus

Hard-pure	Hard-applied	Soft-pure	Soft-applied
Physics	Computing Science	Economics	Business and Management

Table 2: Lecturers' top two nominations for the most prestigious journal in their discipline

Hard-pure	Hard-applied	Soft-pure	Soft-applied
Physics:	Computing Science:	Economics:	Business and Management:
(1) *Physical Review*	(1) *ACM Transactions on Programming Languages and Systems*	(1) *American Economic Review*	(1) *Academy of Management Review*
(2) *Physical Review Letters*	(2) *Theoretical Computer Science*	(2) *Quarterly Journal of Economics*	(2) *Administrative Science Quarterly*

nominate until two journals received more nominations than any of their rivals.

The journals which were nominated for inclusion in the corpus are given in Table 2.

Ten articles were selected in each discipline, making 40 in all. All of the RAs that were included in the corpus were single-, rather than multiple-authored. This ensured that all of the authors, in theory at least, had the opportunity to use the pronoun *I* to refer to themselves, an option not available when a paper has more than one author.[2] The corpus ran to approximately 325,000 words. I refer to each discipline in the corpus by abbreviating as follows: B&M (Business and Management), COMP (Computing Science), ECON (Economics), and PHYS (Physics). So, for example, the eighth RA in the Economics subcorpus is denoted by the abbreviation ECON 8. Full details of the content of the corpus can be found in the appendix.

3.3 Building the corpus

The selected RAs were either obtained directly from the electronic versions of the relevant journals or manually scanned and converted to Text format. All abstracts, footnotes, endnotes, and reference lists were deleted, and the corpus was quantitatively and qualitatively analysed using the WordPilot 2000 concordancer (http://www.compulang.com/). All occurrences of *I* and *we* had to be studied in context to ensure they were being used by the writer

of the text and not by other parties like the writer's informants. In the following extract from a Business and Management article, for instance, the writer is quoting interview data, and the informants are using pronouns to interact with the interviewer and to report what their colleagues said:

> Another member, Joe, described this phenomenon in similar terms, 'Our group is very good; if something comes back to us, **I** think all of us will say, 'Yeah, **I** did that.' **I** don't think there is any of us who wouldn't—where before it was, '**I** don't remember . . . .' Now **I** think everyone takes responsibility.

Pronouns such as these were deemed irrelevant for the purposes of this study.

Having outlined the methodology and procedure behind my corpus construction, I now move on to the analysis itself. I begin with a brief quantitative analysis of *I* and *we*, before moving on to the qualitative analysis.

4. DATA ANALYSIS

4.1 Quantitative analysis

Quantitative figures revealing the frequency of *I* and inclusive and exclusive *we* are given in Table 3.

There is a clear hard/soft disciplinary split in the writers' use of inclusive *we*. All instances of *we* in the Business and Management articles, and all but one of the instances of *we* in the Economics articles, are inclusive rather than exclusive:

> (1)   Thus, **we** are seeing a resurgence in questions about what organizations are and how **we** should relate to them. (B&M 4)

Table 3: Frequency figures for I, exclusive WE, and inclusive WE in the corpus according to discipline

	I: total no. of occurrences	*I*: freq per 1000 wds	Excl *WE*: total no. of occurrences	Excl *WE*: freq per 1000 wds	Incl *WE*: total no. of occurrences	Incl *WE*: freq per 1000 wds
Physics	4	0.10	210	5.45	20	0.52
Computing Sci	20	0.23	423	4.82	206	2.35
Economics	313	3.24	1	0.01	60	0.62
Business & Mngt	433	4.24	0	0	107	1.05

(2) Few economists are willing to concede that individuals simply do not know what they are doing. **We** may permit imperfect information, transaction costs, and other intervening variables to muddy the waters, but **we** do not model behavior as being determined by forces beyond the control of the individual. (ECON 5)

In contrast, only a third of the instances of *we* in the Computing articles, and under 10 per cent of the instances in the Physics articles are inclusive. When *we* occurs in the hard fields, it is typically exclusive:

(3) A prerequisite for cutoff recompilation to work is the presence of accurate and detailed dependency information. This information could be supplied by the programmer, but when creating CM **we** were interested in deriving that information directly from a given unordered set of source files. (COMP 1)

(4) In Figure 1 **we** present results for the condensate and non-condensate densities and the current density for a range of amplitudes, A, of the coupling strength. (PHYS 4)

These differences can be explained by the soft disciplines' preference for *I* over *we* to refer to the writer: all ten of the Business and Management writers are prepared to use *I*, while nine of the ten Economists do so. So while the hard disciplines use inclusive *we* to refer to the community in the same way as the soft fields, Physicists and Computing Scientists prefer exclusive *we* over *I* to refer to themselves.[3] Consequently, cases of *I* in the hard fields are rare. Indeed, only one of the ten Computing experts used *I* rather than exclusive *we* in the main body of their text, and there were just four cases of *I* in the whole of the Physics subcorpus, all of which featured in the acknowledgements sections.

4.2 Qualitative analysis

4.2.1 Moving between inclusive and exclusive pronouns to construct novelty

Writers in all four disciplines represented in the corpus were found to move between exclusive and inclusive pronouns. Having represented the community's lack of knowledge via inclusive *we*, the writers in the extracts below then employ *I* to highlight the novelty of their own contribution:

(5) **We** do not seem to have [a] theory of how users initially comprehend the capabilities of a technology.

The features-based theory of sensemaking triggers (FBST) **I** present here attempts to fill this gap. (B&M 8)

(6)   In developing such response strategies, it seems that **we** need to answer three general questions about stakeholders:

Here, **I** intend to suggest that although researchers have been addressing the first two questions, they have given the third question, regarding stakeholder means—or stakeholder influence strategies—only piecemeal attention. (B&M 7)

(7)   Careful calibration combined with thorough sensitivity analysis can then lead to simulations that offer a first-order approximation of likely impacts of private-school vouchers under different assumptions about factors on which **we** currently have little evidence. Such an approach can clarify the nature and magnitude of the general-equilibrium forces that are likely to emerge under vouchers and guide empirical research in searching for more information on important factors about which **we** know too little.

It is this research strategy that **I** employ here. (ECON 7)

(8)   Published examples often use them, but UNITY has no notion of locality. At best, **we** can declare that certain variables may only be updated by certain processes, and forbid compositions that violate these restrictions. In general, **we** need a treatment of compatibility: the relation that holds between components that may be composed.

I am developing a formalization of compatibility, but the experiments reported in this paper are based on the simplest treatment of locality. (COMP 3)

In Swales' (1990) terms, the first three writers are moving between inclusive and exclusive pronouns to create a research space. Although extract (8) cannot provide the missing knowledge it is claimed the community lacks (*we need a treatment of compatibility*), the writer effectively advertises the novelty and merit of work they intend to publish at a later date, which it is claimed will supply this missing knowledge.

The contrast between inclusive and exclusive pronouns can also be used to argue that the community as a whole will benefit if they follow the writer's methodology:

(9)   **I** also argue that **we** can build better process theory, and better explanations in general, through the use of narrative data and structural methods of narrative analysis. (B&M 9)

Similarly, the following extract constructs novelty by contrasting the community's canonical way of thinking (as represented by the writer via inclusive *we*) against the writer's way of doing things:

> (10) Narrative is relevant to a broad range of theoretical concerns, but what is its role in explanation? **We** are accustomed to thinking of explanations in terms of R-squared, but in this section **I** want to elaborate on the idea that explanation requires a story and that stories can be understood as process theories. (B&M 9)

The final examples I include here to show how switching between inclusive and exclusive pronouns can construct novelty in a slightly different way. Whereas all of the extracts above have moved from *I* to *we* or vice versa, these passages only feature *we*. In (11), by moving from an exclusive to an inclusive use (*we see*), the writer can be said to be attempting to persuade the readership that the writer has achieved *statistically significant and outstanding* results:

> (11) **We** have assumed a 60 per cent heavy quark tagging efficiency corresponding to the expectations for linear colliders, an electron beam polarization of 90 per cent, a 10° angular cut around the beam pipe and included of initial state radiation. **We** see that these distributions provide a statistically significant and outstanding signal for graviton exchanges. (PHYS 3)

In (12) it is possible to argue that the writer is deliberately exploiting the fuzziness that exists between exclusive and inclusive *we*. While the second *we* is undoubtedly exclusive, the first instance is less clear-cut:

> (12) A second concern is that the languages used for lexical analysis in most compilers are designed so that an unbounded amount of lookahead beyond final states is never necessary. [7] Consequently, **we** would like to have a mechanism that entirely avoids the overheads of the tabulating scanner in cases in which tabulation is not warranted. To address this concern, **we** present an implementation of the tabulating scanner that imposes no overhead in many cases that cannot produce superlinear behavior. (COMP 5)

While the first *we* can be read as exclusive, meaning that it is the author him- or herself who is anxious to create the mechanism in question, an alternative interpretation is that the author has slipped in an inclusive *we* here—helping to suggest that the paper is addressing the community's concern for the creation of the mechanism. The effect is to maximize the appeal of the work to the readership, since the RA apparently plugs a disciplinary knowledge gap.

4.2.2 Describing disciplinary practices

Inclusive *we* is used to describe the practices or beliefs of the community as a whole. This is particularly useful for the economist in the next extract, who is writing a theoretical position paper.[4] The inclusive pronouns construct positive politeness, making the reader feel included, addressing them as a peer rather than an apprentice:

> (13) Economists, almost without exception, make constrained maximization the basic building block of any theory. Many of **our** empirical analyses seek to test models that are based on maximizing behavior. When **we** obtain results that seem to deviate from what would appear to be individually rational, **we** reexamine the evidence or revise the theory. But the theoretical revisions almost never drop the assumption that individuals are maximizing something, even if the something is unorthodox. Few economists are willing to concede that individuals simply do not know what they are doing. **We** may permit imperfect information, transaction costs, and other intervening variables to muddy the waters, but **we** do not model behavior as being determined by forces beyond the control of the individual. (ECON 5)

The same writer goes on to juxtapose the discipline of Economics with other social sciences; and in the next extract, it is Psychology which is under the microscope. Notice how inclusive *we* allows the writer to portray an 'us' and 'them' situation, the writer and audience belonging to one homogeneous group. The passage is contrasting the findings of two psychologists (Schkade and Kahneman) with an economist's putative interpretation of the same situation:

> (14) Despite the common perception that living in California is pleasant, Schkade and Kahneman [1998] find that Californians are no happier, as measured by their responses to a particular survey, than are non-Californians. They view this as being somewhat anomalous. Perhaps, but an economist would think of this in a different way. Because **we** focus on equilibrium, **we** would argue that the marginal person in Chicago can be no less happy than the marginal person in California. (ECON 5)

Inclusive *we* can also describe propositions and hypotheses the writer would expect the community to endorse:

> (15) Thus, if proximity to cities matters for labor-market shocks, **we** would expect wages in Ciudad Juarez and Tijuana to converge more quickly to the U.S.-border wage differential than wages in Matamoros and Nuevo Laredo. (ECON 8)

(16)   Since all workers obtain the same ex ante utility in both equilibria, it follows that all workers are better off, ex ante, when factor markets are integrated. In particular, unskilled workers are better off, which means that the equilibrium return to unskilled labor must be higher in the integrated-markets equilibrium, i.e., $w*l > w'l$. Hence we have the following proposition.

PROPOSITION 1: When investment in human capital is privately financed, the integration of markets for skilled labor

(1)   raises the equilibrium return to unskilled labor ... (ECON 10)

Positive politeness is constructed because the writer is assuming that the audience is sufficiently competent and well-versed in the literature to be able to follow the argument and arrive at the same conclusions.

4.2.3 Critiquing disciplinary practices

Sometimes inclusive *our* and *we* reduces the writer's discipline, together with its practices, down to a homogeneous entity in order to critique it:

(17)   Of course, **our** conceptualization and description of sequential patterns force a classic tradeoff among simplicity, accuracy, and generality (Weick, 1979). For the sake of simplicity, **we** often describe processes as a fixed sequence $(A \rightarrow B \rightarrow C)$. Unfortunately, this typically entails a sacrifice in accuracy, because most real processes cannot be described as a single sequence or narrative. (B&M 9)

Note how inclusive *we* combines with other cotextual features, like *let alone* and scare quotes in the extracts below to help the writer signal how flawed they believe these common practices to be:

(18)   In organizational research **we** generally have data from the surface (text, discourse, or something equally superficial, like a survey). In terms of the levels in Figure 1, these data are quite distant from the objective story (fabula), let alone the underlying generating mechanism. (B&M 9)

(19)   Thus, when confronted with conflicting indicators in our surface-level data, for example, **we** compute an interrater reliability, or **we** attempt to 'triangulate' with other data sources. (B&M 9)

The writer then describes the preferred methodology which he or she is arguing that the discipline should adopt. Hence inclusive *we* is now being used to obtain a rather different textual effect. Rather than underscoring the community's failures, as in the extracts above, *we* now helps to urge the

community to push the discipline forward by taking up the writer's proposals:

> (20)   This article suggests three kinds of answers. First, **we** need to pay attention to all aspects of narrative—not just sequence. [...] Second, **we** need to be aware of the fact that stories may be their own best explanation. [...] Third, regardless of what approach **we** take to creating it, **we** need to understand that an explanation is basically a process theory—a hypothesis about a causal sequence of events. As Lawrence (1997) suggests, **we** need to open the black box and take a look inside. (B&M 9)

4.2.4 Elaborating arguments (1): the community's or the researcher's?

Through the use of communal *we* the writer can be seen to be acting on behalf of the readership as a kind of spokesperson, elaborating an argument with which the community would concur. However, social constructionists like Bruno Latour (e.g. 1987) would argue that many cases of the *ostensibly* inclusive *we* found in the hard disciplines are in fact exclusive, or rather exclusively manipulative, covertly instructing the reader how to interpret the data. For all the supposed positive politeness, for Latour the writer's primary aim is to persuade the reader to see things their way. The (supposed) inclusiveness, then, is self-serving, heightening the rhetorical effectiveness of the text. For instance, in (21) and (22) below, inclusive *we* combines with lexis (*poor*; *up to the discovery limit*; *realistic*; *simplifies*; *effective*) which carries positive or negative evaluation (see Thompson and Hunston 2000), suggesting the writer has very definite views they want the readership to take on board:

> (21)   The value of $\times 2$ per degree of freedom is computed and the resulting confidence level of the fit is presented in Fig. 2 as a function of the string scale. **We** see that the quality of the fit is quite poor for string scales up to $\sim$5vs, which is almost up to the discovery limit. This demonstrates that spin-2 graviton exchanges are easily separated from that of new vector bosons. (PHYS 3)

> (22)   It should be apparent that any attempt to accurately characterize the properties of a system as complex as a partially dissociating mixture at extreme conditions will require some degree of chemical intuition and empirical approximations. However, by starting with a metalliclike fluid **we** have a more realistic model and one that simplifies the fitting procedure. By fitting F1 to a single data point, **we** obtain an effective interatomic potential that is, in effect, the correction to the free energy for all the inadequacies of the model. (PHYS 8)

The next set of extracts is similar. Like some of the texts discussed above in 4.2.1, the writers use *we* to identify a collective lack of knowledge or a hoped-for state (*we need an account of x; if we can ensure/generate x*). But the fact that the writers then go on to supply the missing knowledge and/or fulfil the hoped-for state they have identified (*that is the central purpose of this article*) makes a Latourian interpretation persuasive. Despite the trappings of communality constructed by the inclusive pronouns, the writer is in fact firmly in control. The arguments belong to the writer rather than to the community:

> (23)   Missing from the theory, then, has been an account of how stakeholders manage a firm to enable them to achieve their interests, possibly at the expense of the firm's. [...] For anyone building theory, this should be interesting in its own right, but even from a pragmatic managerial standpoint, this has to be of interest. [...] And, if what a firm should do is partly determined by what its stakeholders will do, **we** need an account of what its stakeholders will do. Therefore, to be really useful to a firm trying to manage its stakeholders, stakeholder theory must provide an account of how stakeholders try to manage a firm. Again, that is the central purpose of this article.... (B&M 7)

> (24)   **We** can therefore use $(1 - (1 - qd2)m)n - 1$, where d is the average degree, as a lower bound on the probability of backtrack-free search using BT. If **we** can ensure that the value of this is at least 0.5 for some fixed value of the constraint tightness, for all n, **we** know that the true probability of backtrack-free search at that constraint tightness is at least 0.5, and hence **we** have the required region of trivial solubility. (COMP 8)

> (25)   'If **we** can generate instances in such a way that the probability of backtrack-free search is always positive for some range of values of p2, for all values of n, **we** shall no longer have the situation where almost all problems become trivially unsatisfiable for sufficiently large values of n. This would then be the first step towards a CSP model which gives an interesting asymptotic phase transition. (COMP 8)

The writers' promise that they will plug this knowledge gap later in the RA also creates a self-promotional effect.

The final two extracts considered here allow the writer to make explicit their preferred interpretation by initially presenting what the writers claim are erroneous interpretations of the data. In (26) the researcher provides the conclusion that the readership would arrive at if they were to interpret the figures 'naively', before supplying us with the correct version:

> (26)   The regressions in column I suggest that reductions in class size improve achievement significantly. Four out of the six coefficients are statistically significant at the 5 percent level, and

all six coefficients have the 'right' sign. If **we** were to interpret these results naively, **we** would conclude that a 10 percent reduction in third grade class size raises fourth grade math scores by about 12 percent of a standard deviation. As **we** narrow in on the discontinuities, however, such results disappear. (ECON 3)

So on one level, the communal pronoun/conditional structure constructs readers as masters of the discipline—the implication being that the readers are too knowledgeable to fall into this trap. On another level, of course, a Latourian reading is still possible, and the pronoun/conditional phrase is a device to enhance the rhetoricity of the discourse. By describing an alternative reading of the data as *naïve*, the researcher steers the audience in the direction of their preferred interpretation. In (27) inclusive *we* can be seen to be acting as a hedge, protecting the writer from attack:

(27)   Because all of the estimates are close to zero, the four specifications do not seem very different, but in fact **we** should remember that they use different enrollment residuals as the estimates as log (u). (ECON 3)

First the writer interprets the data in the way they expect the audience to—a way which is erroneous, in the writer's view. To soften the FTA of indirectly calling the readers' judgement into question, the inclusive pronoun allows the writer to efface their own presence from the text. If an exclusive pronoun phrase had been used instead, something like:

. . . the four specifications do not seem very different, but in fact **you** should remember that they use different enrollment residuals . . .

then the potential to cause offence would have been much greater.

4.2.5 Elaborating arguments (2): asking questions

One of the ways a writer can enhance the interactive quality of a text is by formulating questions which might be posed by an imaginary readership. Because of the inevitable artificiality, since *real* readers cannot pose questions, Thompson and Thetela (1995) speak of the writer-constructed 'reader-in-the-text'. Hence the inclusive pronouns in the extracts below help to simulate reader/writer dialogism, making the reader feel involved in the argument:

(28)   How do **we** keep $(1-(1-qd2)m)n-1$ constant at a specified value of p2, when n is increasing? To achieve this, $(1-qd2)m$ must decrease, and hence either m must increase or d must decrease. (COMP 8)

(29)   Do **we** have any grounds to assert that her performance has been unsatisfactory? By the usual strong law of large numbers **we** can conclude that γt are not the true probabilities (conditional

on the past) of wt = 1, but the expert can still claim that her performance has been good and that nobody else would have performed better; there is no way to falsify this claim within the framework of the traditional probability theory. (COMP 10)

In line with Hyland (2001, 2002b) and Webber (1994), who conducted corpus-based analyses of questions in academic prose, I found that some of the questions in my own corpus were not answered by the writer immediately:

(30)   As Abbott (1990) notes, description is an essential first step. But, in the following sections, **I** want to explore the problem of creating explanations ('Why are there patterns? Why do **we** observe these antecedents and consequences?'). (B&M 9)

The resulting tenor is more self-promotional than inclusive in these cases. By asking a couple of eye-catching questions which the writer promises to answer later on, our interest is maintained and we keep reading. The inclusive pronoun helps to convey the message that the question is of interest to the community at large.

4.2.6 Methodological description

Inclusive *we* is sometimes used to talk the readership through general methodology or specific procedures. Solidarity is constructed here, as the writer is not claiming to hold a monopoly on the techniques in question; the implication is that any member of the audience possesses the necessary expertise to carry the procedures through to fruition:

(31)   In ML **we** can take any number of declarations and bundle them as a named structure. A structure definition is introduced by the keyword structure; the body of the structure is enclosed within struct and end. For example, **we** can write

[[Computer programming code follows]] (COMP 1)

(32)   When building the system, **we** form the union of the signatures of the components.

Typically **we** have to add variables to each signature. (COMP 3)

(33)   'In order to apply this theorem, **we** start with a guarantee for F, for type a, that **we** need to extend to some other type y. **We** must choose program properties X' and Y' that adequately represent the guarantee that **we** require and choose a function p such that (i) and (ii) hold. (COMP 3)

(34)   Random binary CSPs can be generated using a simple model [...] **We** first generate a constraint graph G, and then for each

edge in this graph, **we** choose pairs of incompatible values for the associated conflict matrix. (COMP 8)

Similarly, inclusive pronouns are used to guide the audience through the often convoluted mathematical explanations, proofs, and models Computing Scientists and Economists need to expound. The phrases *we need* and *we have* are often used for this purpose:

(35)   Next, **we** explain why o'3 C o'. [...] Choosing lub(t1, t2) ensures the increasingness property. But **we** need to prove that it is not too big, i.e., lub(t1, t2) C t'3.

Since o3 C o', t1 C t'1 and t2 C t'2. In order to show that lub(t1, t2) C t'3, **we** need only to show that lub(t'1, t'2) C t'3, i.e., t'1 C t'3 and t'2 C t'3. (COMP 4)

(36)   Letting Yt denote aggregate production of intermediate goods, **we** have

$Yt = NF(Kt/N, ztHt/N)$. (ECON 9)

(37)   Suppose that **we** know Pr $(D = 1|Z)$, where Z is a vector of determinants of work. Hence **we** know that Pr $(D = 0|Z)$. (ECON 2)

Alternatively, *we have* can also serve to enhance the reader-friendliness of the text in Economics RAs when propositions are introduced:

(38)   In particular, unskilled workers are better off, which means that the equilibrium return to unskilled labor must be higher in the integrated-markets equilibrium, i.e., $w*l > w'l$. Hence **we** have the following proposition.

PROPOSITION 1: When investment in human capital is privately financed, the integration of markets for skilled labor

(1)   raises the equilibrium return to unskilled labor.... (ECON 10)

Finally, inclusive pronouns in conditionals can also walk the readership through proofs and mathematical explanations:

(39)   'If **we** can ensure that the value of this is at least 0.5 for some fixed value of the constraint tightness, for all n, **we** know that the true probability of backtrack-free search at that constraint tightness is at least 0.5, and hence **we** have the required region of trivial solubility.' (COMP 8)

In extracts like the above, communal *we* has something of the discourse guide about it, in that the author is talking the readership through a procedure step-by-step, in order to break the lengthy proof sections up to make them manageable and digestible (see the next section for a more

extended discussion of how inclusive and exclusive pronouns act as organizers of discourse). The writer advertises the next stage of the process in advance, helping to make the reasoning easier to follow:

(40) Since (12) can be applied with $C = UNIV$, **we** could have gotten this far without having C in our theory at all. Now **we** come to results that depend, crucially, upon C. (COMP 3)

(41) **We** are now ready to formalize the key point in Section 4.2 . . . . (COMP 4)

(42) **We** are not done yet, for **we** can further narrow the Tab set and still have Tokenize retain linear-time behavior. (COMP 5)

(43) How do **we** keep $(1 - (1 - qd2)m)n - 1$ constant at a specified value of p2, when n is increasing? (COMP 8)

The relative informality of these passages is reminiscent of a spoken lecture rather than a written paper.[5] As in a spoken lecture, there is explicit signalling (e.g. *we are not done yet*, rhetorical questions) to guide the reader, and to show that the process is not complete.

Despite the trappings of inclusivity, however, extracts like (44) are a reminder of who is leading the discussion. The writer is about to outline a programming procedure, beginning the explanation thus:

(44) Here is how **we** combine these components to form a system. (COMP 3)

Despite the (apparently) inclusive pronoun, the audience are being lectured at, rather than consulted.

4.2.7 Discourse guide

Often found near the start of the RA, the inclusive phrase *as we shall/will see* is used to enhance the reader-friendliness of the text and construct positive politeness by treating the readership as equals.[6] In addition, *as we shall/will see* provides the writer with the opportunity to flag up the newsworthiness of the research, advertising their findings in advance. Consequently, there are some strong claims behind the communal veneer in order to attract maximum attention:

(45) This balancing act—explicit dependencies between groups but implicit dependencies within groups—is important. As **we** will see, one must impose certain restrictions on the source language to be able to make dependency analysis tractable. (COMP 1)

(46) Progress properties, as **we** shall discover in the next section, present severe problems. (COMP 3)

(47)   The general division problem involves a numerical system of linear equations. However, **we** shall see that the complete solution of this system is unnecessary. **We** only need a partial solution sufficient to compute the remainder polynomial. (COMP 9)

(48)   In the latter case **we** examine a novel feature of this theory, which is the contribution of gluon-gluon initiated processes to lepton pair production. As **we** will see, these processes provide strong bounds on the effective Planck scale which are essentially independent of the number of extra dimensions. **We** also quantify the extent to which the spin-2 nature of the graviton exchange is distinguishable from other new physics contributions. (PHYS 3)

This apparent desire to create a dramatic impact explains the presence of cotextual language (*important*, *novel*, *only*, *severe problems*, *discover*), which combines with *we shall/will see* to underscore the novelty of the work. And in (48) inclusive *we* is sandwiched between two instances of its exclusive equivalent, both of which self-promote. These extracts are therefore good examples of how pronouns can behave multifunctionally. The inclusive pronouns in these texts can be seen to be acting as discourse guides while at the same time helping to promote the researcher, and/or constructing solidarity with the readership.

While *we shall/will see* points forward, the inclusive pronoun phrase *we have seen/we saw* is used to refer back to ground already covered, in order to summarize the writer's argument or findings before moving on:

(49)   As **we** have seen, at least in the case of ML's open they can also make automatic dependency analysis hard. (COMP 1)

In (50)–(52) below, the reference back to a point already proved allows the writers to make further proposals:

(50)   **We** have seen that bundling occurs for stiff, long chains, and when the chain length decreases, the degree of bundling decreases. Presumably, the same will happen as the chain stiffness decreases. Particularly for divalent counterions in the condensation regime, the screening of the monomer-monomer Coulomb repulsion will be strong. (PHYS 5)

(51)   **We** saw in subsection A that the unconditional correlation of one-quarter changes in consumption and output are positively correlated when intrinsic uncertainty in the form of a technology shock is added to the model, thus it is natural to ask whether in this case both variables are also expected to move in the same direction after the impact of the shock. (ECON 9)

(52)   **We** have already observed that the mobility of skilled labor has an important effect on the structure of taxation: when skilled workers are perfectly mobile, competition among jurisdictions

eliminates the taxes that they pay (ts$=0$) and only unskilled workers are taxed to finance human capital investment. What happens, however, to the level of investment in human capital? (ECON 10)

Finally, inclusive pronouns can also refer the reader to charts and diagrams outside the main body of the text, clarifying their meaning by talking the audience through specialist terms which feature:

(53)   When **we** go back to the example in Figure 1, **we** discover that under such a rule, regardless of B's contents, line 7 would always refer to the definition of x on line 1 because neither open B nor open A would be able to override it. (COMP 1)

(54)   Figure 1 integrates the three levels commonly used in narrative theory, with an additional level that is implied by the work of Van de Ven and Poole (1995) and Pentland (1995).

(55)   At the deepest level **we** have the 'generating mechanism' that drives the process. (B&M 9)

4.2.8 Further research and state-of-the-art concerns

This final section of the analysis looks at how inclusive pronouns can help to indicate where further research is required in areas the writer has begun to explore. If the writer's suggestions are taken up, there is the potential for an advance in disciplinary knowledge:

(56)   In general, **we** need more studies that connect institutional change to variation in the content of organizational practices. [. . .] By understanding how the content of organizational practices is shaped by broader institutional forces, **we** may develop new insights about the sources of organizational heterogeneity and gain significant leverage in identifying why organizational diversity exists in some fields but not in others. (B&M 3)

Similarly, the writer can use inclusive pronouns to help to identify a community's current research concerns. Example (57) below is found near the end of an RA, where the writer is summing up. Not surprisingly, their own piece has addressed some of these concerns. Hence the effect is self-promotional:

(57)   Cheney (1991) noted that the management of members' identification is the critical management issue for the next century. [. . .] Taken together, these trends can be potentially disastrous for organizations: they are losing supervisory control at the same time that their members are feeling less and less loyalty to the company. Thus, __we__ are seeing a resurgence in questions about what organizations are and how __we__ should relate to them.

[...] The identification-management practices described here further practical knowledge by giving **us** a new model to interpret existing organizational practices, as well as suggesting new avenues for managerial action. (B&M 4)

The writer of (58) uses an inclusive pronoun to construct positive politeness at the same time as they address state-of-the-art disciplinary concerns. Here are the closing sentences of the RA:

(58)   Whether the reader's purpose is to encourage or change organizations that try to win the minds and hearts of their members, perhaps it is best to understand first the psychological process that these organizations evoke. Only then can **we** duplicate, or find substitutes for, what these organizations provide for their members. (B&M 4)

Although the writer could be seen to be determining the agenda by suggesting the appropriate line of research to follow, the audience is constructed as disciplinary equals. The writer takes it for granted that the readers are research-active and are looking to plug disciplinary knowledge gaps through studies of their own. There is a sense of the whole of the community striving to push the frontiers of the discipline forward.

5. SUMMARY

This paper has shown that the soft and hard disciplines represented in my corpus use inclusive and exclusive pronouns to differing degrees of frequency and to help create a number of different textual effects. By moving between inclusive and exclusive pronouns, writers can help to create a sense of newsworthiness and novelty about their prose, showing how they are plugging disciplinary knowledge gaps. Inclusive pronouns can help to describe and/or critique common disciplinary practices, and elaborate arguments on behalf of the community (or, if we follow Latour, persuade the community that the writer's argument is the correct interpretation). Irrespective of which interpretation is chosen, however, the pronouns help create a positively polite tenor of solidarity. Inclusive pronouns can also be used to organize the text, and to advertise the writer's claims and findings right from the start, as well as to map the structure of the paper out for the reader. Finally, inclusive pronouns can also be used to flag up the current problems and subject areas which preoccupy the discipline.

6. EAP TEXTBOOKS AND INCLUSIVE AND EXCLUSIVE PRONOUNS

The above analysis makes clear that inclusive and exclusive pronouns were found in both the hard and soft fields, and in all of the four different

disciplines studied. However, a study of 21 English for Academic Purposes (EAP) textbooks' treatment of pronouns (Harwood 2003) found that all but one of the textbooks analysed (Swales and Feak 2000) either provide misleading information on pronoun use or fail to provide enough information to be sufficiently helpful and meaningful to learners. Indeed, Harwood found nine of the 21 textbooks, including popular textbooks like Hamp-Lyons and Heasley (1987), Weissberg and Buker (1990), and Trzeciak and Mackay (1994), contained no information about first person pronouns at all, and while he argues in a subsequent article (Harwood 2005b) that materials writers are constrained by space limitations and cannot hope to include everything they would like to in an EAP textbook, and that many of the textbooks which are silent on the subject of pronouns were written before any corpus-based studies of pronouns were carried out, the fact that a number of pronoun studies have revealed significant disciplinary variations in pronoun use would suggest the topic is worthy of attention. The present section, then, briefly reviews a few textbook pronouncements on inclusive and exclusive pronouns, comparing these pronouncements with my corpus data, although it should be borne in mind that my corpus can only reveal patterns of pronoun use in expert writing, rather than in student writing. I return to this issue later.

It is clear that the authors of a number of textbooks do not believe that both inclusive and exclusive pronouns have a place in student writing. For instance, both Hubbuch (1996) and Day (1998) warn students to avoid the so-called 'editorial we', which Quirk *et al.* (1985) say is used 'by a single individual, and is prompted by a desire to avoid *I*, which may be felt to be somewhat egotistical' (p.350):

> . . . don't use the editorial *we* as a roundabout way of saying *I*. (Hubbuch 1996: 158)

> Do not use the 'editorial we' in place of 'I.' The use of 'we' by a single author is outrageously pedantic. (Day 1998: 210)

While my corpus analysis cannot of course determine whether or not the authors analysed who avoided *I* did so for reasons of modesty, it can at least reveal whether exclusive *we* does or does not occur. On the basis of corpus evidence, then, Hubbuch's and Day's advice is sound in the disciplines of Business and Management and Economics, where just one case of exclusive *we* was found. However, the vast majority of occurrences of *we* in the hard fields in my corpus were exclusive. Of the 230 occurrences in Physics RAs, some 210 (91 per cent) were exclusive; and of the 629 cases in Computing RAs, some 423 (67 per cent) were exclusive (see Table 3). Hence it is clear from the data that advice to avoid exclusive *we* only reflects the (expert) written norms of certain disciplines, and is therefore likely to be inappropriate for a textbook which is supposed to be relevant to students from a range of subject areas.

Although Day's (1998) and Hubbuch's (1996) advice would mislead a multidisciplinary EAP class, at least their advice is reasonable for some of the disciplines. However, Swetnam's (2000) advice is relevant to no one, as students are advised to avoid personal pronouns altogether:

USING A DETACHED AND PASSIVE STYLE

> The general academic style used all over the world is detached and passive. Unless there is a special reason personal pronouns are to be avoided. Never 'I showed by my research that . . .' but 'The research showed that . . .'. Other expressions used include: 'The author found . . .', 'The writer . . .'. 'It was discovered that . . .'(Swetnam 2000: 84)

While my study focuses on pronoun use rather than avoidance, it is clear that none of the disciplines analysed avoid pronouns totally in the way Swetnam is suggesting when he claims that 'personal pronouns are to be avoided'.

For his part, Watson (1987) appears to believe that the only 'proper' function of *I* and *we* is 'to suggest a rare and exceptional emphasis'. The precise function he has in mind is unclear, but I take it to be the most face-threatening use, that of expressing opinion:

> *We* needs to be used only sparingly, if at all, and it should suggest a rare and exceptional emphasis; *I*, an even rarer emphasis. The tone to seek here is cool, explanatory and varied, but not neutral. (p.68)

He then goes on to criticize the use of inclusive pronouns as discourse guides:

> Superfluous phrases may find their way into early drafts, but they have no business to survive revision: *as we shall see, as we have seen; before we consider Y, we must first consider X*. That is to hum and haw—and it is as exasperating in an author as in a platform-speaker. It is always superfluous, in this context, to say that you are about to say something, or that you have said it. The only business is to say it, and once is enough. [. . .]
>
> Omission means the deletion of words and phrases which, like *as we shall see*, plainly clog the flow of argument with superfluous matter. No reader of a thesis expects all the points that there are in an argument to be made at every point in that argument. It is superfluous, then, to remind him that this is so—even, as he may irritably think, insulting to his intelligence. (p.71)

Although Watson concedes that pronouns can be incorporated into discourse-guiding phrases like *as we shall see* to help organize the text, he claims these are clumsy stylistically. And although stylistic elegance is not something this paper is directly concerned with, the fact is that my corpus analysis shows that expert writers in each of the disciplines analysed used

pronouns as discourse guides which organize the text. On average, over 7 per cent of cases of *I* and *we* functioned as organizers in the corpus. Whether Watson thinks this function should be deplored or not, writers use pronouns in this way, and students' awareness of the various functions pronouns can play in texts should surely be raised.

I now return to the fact that the EAP textbooks are making pronouncements on student writing, whereas my corpus data are taken from expert writing. I am aware, of course, that it is important to bear in mind that student writing is a different genre to 'expert' (i.e. journal) writing (see, for instance, Crammond 1998; Hewings and Hewings 2002; Hyland 2002a, 2002b; Samraj 2002, 2004; Harwood 2003, 2005a), and that it does not necessarily follow that student writers should imitate everything that journal writers do (Horowitz 1986; Johns 1988; Paltridge 2002). So even if both inclusive and exclusive pronouns are indeed a regular feature of RAs in certain disciplines (e.g. Computing), this does not necessarily mean that EAP textbooks should be encouraging students to include both inclusive and exclusive pronouns in their essays. Arguably, then, EAP materials need to be informed by corpora of successful student writing as well as by expert writing. I am equally aware that the range of textbooks I have referred to are dispensing advice on different things: Hubbuch (1996) is advising students how to write research papers, Day (1998) is focusing on the process of writing and publishing RAs, while Swetman (2000) and Watson (1987) are concentrating on dissertations and theses. Hence one would presumably expect some degree of variation in the advice proferred, given the differing generic conventions being discussed. However, in the light of the pronoun advice discussed above, it is worth asking whether EAP materials writers are considering corpus evidence at all when they prepare advice and design activities for learners, or whether they merely reproduce folk wisdom intuitively ('The general academic style used all over the world is detached and passive'). Certainly other studies of modals and/or hedging which compare corpora of the language writers use with the language textbooks teach (e.g. Holmes 1988; Hyland 1994, 1998; McEnery and Kifle 2002) are far from reassuring. All of these studies conclude that EAP textbooks are not only failing to teach the full repertoire of modal language, they are also failing to teach a number of items learners would find most useful, while providing misleading explanations for some of the language they do decide to include.

7. PEDAGOGICAL IMPLICATIONS

I believe that both the range of textual effects that inclusive and exclusive pronouns help the academic writer construct and the disciplinary variation in the use of inclusive and exclusive pronouns which this article has highlighted means that personal pronouns in general, and inclusive and exclusive pronouns in particular, would make an interesting topic of

investigation for EAP classes. As I argued above in Section 6, one of the most obvious implications this study has for writers and practitioners of EAP materials is that course materials focusing on pronouns need to be corpus-based. And while there are signs that corpus-based EAP materials are beginning to appear (cf. Harwood and Hadley 2004; Swales and Feak 2000), much of the material seems to fail to represent the language that academic writers use. I therefore suggest that the most effective way of raising students' awareness of the role that inclusive and exclusive pronouns have to play will be for the EAP teacher to design their own corpus-based classroom activities, and so I close by outlining a few possible activities.

Having first raised learners' awareness of the existence of inclusive and exclusive pronouns, and of the differences between them, a follow-up activity might be to give students partial or complete texts featuring pronouns (ideally from their own disciplines) and to get them to identify which pronouns are being used inclusively or exclusively. The class could then discuss the effect they feel the writers' use of pronouns have on the reader. In line with one of Harwood and Hadley's (2004: 369–70) exercises, the class could be asked what the effect of substituting an inclusive pronoun for the writer's exclusive pronoun (and vice versa) would have on the reader, and why. The teacher and/or the learners could then compile mini-corpora of expert and student writing (i.e. assignments) in their own disciplines. (It is suggested that if student writing is collected, it should be 'successful' student writing. In my study of master's dissertations, for instance, I built my corpus from distinction-grade dissertations, so that student writing which had been judged by subject specialists to be successful was analysed (Harwood, 2005a). The assumption was that distinction grade reports would be more relevant and useful to EAP teachers and students than writing which had been judged to be merely satisfactory or failing, because the top grade is perhaps more likely to be associated with a use of personal pronouns which is acceptable for postgraduate students writing in the given genre and discipline.) The learners can then compare and contrast the use of inclusive and exclusive pronouns in the corpora both quantitatively and qualitatively. In other words, the frequencies of inclusive and exclusive pronouns across student and expert genres can be compared and contrasted, as can the textual effects the pronouns are helping the writers to construct.

Having analysed how pronouns are used in others' writing, the next stage is for the learners to critically examine their own texts. The EAP teacher can ask the class to bring a selection of their assignments into class, and consider how their use of pronouns compares to both experts and (successful) students in their own field. How do the learners explain the similarities/ differences? Why do they use inclusive and exclusive pronouns in the way they do? If they avoid personal pronouns, why? Is this what their discipline does? Based on the evidence from the student and expert corpora, the teacher might next ask the class to try to compose guidelines for the use

of inclusive and exclusive pronouns by student writers in their fields. And, finally, students could interview their subject lecturers to see whether these guidelines meet with the approval of those who will be making judgements about their writing. Ivanič (1998), Johns (1997), and Harwood and Hadley (2004) all envisage the EAP student taking on the role of researcher into the dominant norms of their fields, a role I claim these classroom activities would help to promote.

Finally, mention should also be made of the benefits of taking a phraseological approach to pronouns, that is one which looks at the most commonly occurring collocates or cotext surrounding pronouns, rather than just at the pronouns themselves. This approach would raise learners' awareness of how what I referred to earlier (see 4.2.7) as 'phrases' like *as we will/shall see* or *as we have seen* can in fact be seen as prefabricated units of language. Again, this could be researched by the EAP teacher, and/or by the learners, either electronically by using concordance software, or, if they had collected a small corpus of student or expert writing in their specialist field in non-electronic form, by recording collocations manually. Lists of the most frequent prefabricated units (prefabs) containing inclusive and exclusive pronouns could be drawn up which were discipline-specific, and EAP classes could discuss and try to account for any disciplinary and generic differences, that is, those differences between the prefabs found in student and expert writing. The class could then discuss the suitability of these pronoun prefabs for inclusion in their own writing.

Final version received November 2004

ACKNOWLEDGEMENTS

APPENDIX: CORPUS CONTENTS

	Coding
Business and Management	
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2. Edmondson, A. 2001. 'Psychological safety and learning behavior in work teams,' *Administrative Science Quarterly* 46: 350–83.	B&M 2
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7. Nechyba, T. J. 2000. 'Mobility, targeting, and private-school vouchers,' *American Economic Review* 90: 130–46.	ECON 7
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7. Riseborough, P. S. 1998. 'Theory of temperature-dependent angle-resolved-photoemission spectrum of heavy-fermion semi-conductors,' *Physical Review B* 58/23: 15534–47.	PHYS 7
8. Ross, M. 1998. 'Linear-mixing model for shock-compressed liquid deuterium,' *Physical Review B* 58/2: 669–77.	PHYS 8
9. Shaw, M. J. 1998. 'Localization at interfaces of imperfect A1Sb/InAs heterostructures,' *Physical Review B* 58/12: 7834–843.	PHYS 9
10. Wallace, D. C. 1998. 'Electronic and phonon properties of six crystalline phases of Pu metal,' *Physical Review B* 58/23: 15433–9.	PHYS 10

NOTES

1 This method of selecting the journals for inclusion in the corpus is the same as the method Ken Hyland has used (e.g. Hyland 2001). However, citation indices could also have been consulted.

2 It is of course the case that single-authored RAs are more common in the soft fields which tend to follow the 'lone scholar' model (Snyder and Bonzi 1998), and that they are particularly unusual in hard-pure disciplines like Physics, where large teams of scientists usually research (and publish) together. Indeed, I analysed five years' issues of the journals featured in my corpus to determine single-/multiple-authorship patterns, and found that under 9 per cent of Physics RAs were single-authored. Given the pressure in today's research world to publish, then, I have assumed that any co-researchers would be named, and that Physicists who have written single-authored RAs were genuinely working alone, and were free to use *I* in theory, rather than exclusive *we*. However, the fact that single-authored papers are far less common in certain hard disciplines like Physics than multiple-authored papers cannot be denied. This in turn raises questions about how typical the pronoun use is which I find in the disciplines where multiple-authored papers are the norm. In addition, it is possible that the research being conducted in single-authored Physics papers was perhaps also unusual, given that Physics research grants are normally awarded to teams of researchers.

3 I am suggesting that the writers in the hard fields use exclusive *we* to refer to themselves because their disciplines frown upon *I* usage. However the occurrence of exclusive *we* in any field, whether hard or soft, could be a case of what Quirk *et al.* (1985) call the 'editorial *we*', chosen by a single author because of 'a desire to avoid *I*, which may be felt to be somewhat egotistical' (p. 350).

4 Position papers are not research papers in the same way as other papers in the corpus are, for instance the Physics papers which report experiments. It could therefore be argued that writers of position papers are likely to use pronouns in a very different way, with the result that we should be cautious about the claims to the generalizability of this study. However, we should also bear in mind that while the vast majority of articles from Physics journals are likely to be 'research articles' in the experimental report sense, it is by no means the case that an equally high proportion of articles from Management and Economics are similarly going to consist of experimental reports. Hence it could be claimed that a corpus which contains a mixture of reports and position papers better represents the softer disciplines.

5 It could, in fact, be argued that inclusive *we* is being used here to construct informality rather than, or in addition to, inclusivity.

6 Contrast the much more face-threatening *as you shall see*, which treats the readers as neophytes. Rather than assuming the audience have the necessary disciplinary expertise to both follow the writer's arguments and to assess the validity of these arguments, *as you shall see* simply informs the readers what it is that the writer wants them to take note of. No reader–writer partnership is constructed. Unsurprisingly, no instances of *as you shall/will see* were found in the corpus.

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