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Multiple agendas? A corpus-based analysis of *if*-conditionals in medical research editorials

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1. Introduction

Editorials are probably the most visible expression of opinion in written media discourse. Readers turn to editorials – whether in daily newspapers, weekly magazines or specialised journals – to discover the publication's stand on topical issues and events. Given their important role in leading and shaping opinion, editorials in the general or political press have particularly attracted the attention of analysts in the Critical Discourse Analysis (CDA) tradition seeking to uncover the ideological agendas behind the arguments: "...editorial argumentation, even when seemingly explicit, is often a front for another argumentative agenda." (van Dijk 1992: 253). While this ideological purpose is clear in the case of the political press, it is perhaps less obvious for other social groups. Ideologies however, taken in the broad sense of the term, are not limited to groups with an overtly political platform: professional and institutional groups in society also have structured and goal-oriented interests to defend, defined by the professional identity, norms and values, social position and resources of the group in question.

A powerful professional group in western societies is the medical profession. It is a profession with highly selective access and elite status, extensive social relevance, and a strong corporate sense of identity, possessing its own internal

regulatory bodies (the Conseil de l'Ordre in France, National Board of Medical Examiners in Britain, for example). It comes as no surprise, therefore, that the specialised journals of this professional group also include editorials as a regular feature (Webber 1994). In these highly-valued forms of scholarly discourse, editorials co-occur with the research article, "that master narrative of our time" (Montgomery 1996). This proximity and the prestige of this type of publication may confer on the editorials more authority and apparent objectivity than similar pronouncements in the general press. The source of the discourse – the editorialists – are eminent representatives of their field of expertise, and although the size of the ostensible readership is limited in number compared to that of a mass media paper, it can be assumed that the readers are likewise influential members of the profession and academia. Moreover, the scope of the actual readership extends well beyond this esoteric audience – medical breakthroughs published in specialised journals are usually 'hot' news and make front-page headlines rapidly, while governments, pharmaceutical companies and health services need to follow closely the opinions and pronouncements of the medical profession. What then is the precise communicative status and purpose of these specialised editorials? The present study is an attempt to elucidate what seems at first sight to be their rather complex status.

The particular channel of distribution of these texts in the context of research discourse and their expert authorship raise the question as to whether specialised medical editorials should also be considered a research genre and whether they call on the same argumentative strategies as research articles to structure their claims. Within the system of genres (Bazerman 1994), there is considerable interaction between the medical research article (RA) and editorial (ED) genres. This relationship is one of 'functional intertextuality' in that each genre has a different function within the medical profession (Vihla 1999: 129). The main role of the RAs is to put forward claims, based on research investigations; these claims can then be subjected to assessment within the profession in editorials.

Editorials, in other words, have a metatextual function of evaluating arguments in pre-existing texts:

“In the textual hierarchy formed by medical genres, editorials often function as metatexts, and comment on other texts.” (Vihla 1999: 126).

Applying Räsänen’s concept of ‘genre chain’ – a sequence of genres within a system of genres (Räsänen 2002: 81) – an editorial is therefore often temporally subsequent to the original RA. It also functions however as the interface between research and practice, and not only refers anaphorically to the RA but, Janus-like, points cataphorically towards the feasibility or need for clinical implementation, by urging political or medical institutions, and more market-oriented bodies such as pharmaceutical companies, to take action or remedy their practices.

One widely-used method of investigating argument strategies is to analyse the schematic structure of the genre. Several studies of newspaper editorials along these lines concur in finding a tripartite structure: Definition, Explanation or Evaluation, and Moral or Conclusion (van Dijk 1989: 231); a triadic turn structure of Lead, Follow and Valuate (Bolivar 1994); or Introduction, Intermediate, and Coda (Katajamäki & Koskela 2006). While these studies are interesting for the light they throw on recurrent functions appearing in the press editorial schema, medical editorials appear to have a less clearly marked structure. As Ferguson remarks:

“[Medical] journal editorials are a somewhat heterogeneous, inchoate genre ... Unlike research articles, they have no explicit internal sections, and ... they tend to be variable in their discourse structure.” (2001: 73).

In order to characterise the argumentative strategies of specialised editorials, and to pinpoint areas of difference with the research article, we have therefore preferred to focus on a syntactic pattern which has a potentially important role to play in the construction of argument: *if*-conditionals. *If*-conditionals can fulfil several highly valuable functions in argumentative discourse (Adam 2005): the inherent non-assertiveness of

conditional clauses means that they can be used for hypothesising and hedging (Carter-Thomas 2007), for envisaging alternatives and conceding competing points of view (Declerck & Reed 2001); the role of *if* as a space-builder (Fauconnier 1994; Dancygier 1998) enables the author to set up an alternative argumentative space within which to manoeuvre and situate claims; while the constructional *if P, Q¹* pattern can be exploited to establish causal links or specify the precise conditions under which the research was carried out. By comparing how *if*-conditionals are used in RAs and EDs published in journals in the same disciplinary context, we hope to show how the same basic formal structure can be adapted in different ways for different agendas.

2. Theoretical background and methodology

Studies of conditionals have been approached from a variety of angles. Numerous typologies and classifications have been proposed by philosophers, linguists and grammarians, based on logical or truth implications (Lewis 1976), on the conceptual domains or worlds to which the content of the conditional refers (Sweetser 1990), on semantic distinctions (Comrie 1986) or on simplified verb-sequences, as is generally the case in pedagogical grammars. Many of these classifications prove however difficult to apply in practice.

The idealised tense sequences of pedagogical grammars have been found to provide only a very partial picture of the multitude of combinations that speakers actually use (Fulcher 1991; Norris 2003). Classifications revolving around issues of logic and truth are likewise difficult to apply to naturally occurring text. Many uses of conditionals that are unambiguous for interlocutors in context do not necessarily obey the principles of formal logic, while conversely, logically correct reasoning – as in, for example *If Paris is the capital of France, (then) two is an even number* - is often intuitively unacceptable.

¹ Following the conventions adopted in much of the literature on *if*-conditionals, we will refer to the subordinate *if*-clause as the P clause and the main clause as the Q clause.

As many commentators have noted, natural language also requires some sort of plausible relationship between the two clauses making up the conditional construction.

Other more functionally based classifications such as those of Sweetser (1990) or Athanasiadou and Dirven (1997) also proved difficult to apply to our medical corpus. One difficulty with these classifications, as with several others, is that they are mainly based on decontextualised examples. With a few notable exceptions such as that of Ford's (1997) study of conditionals in conversation and the panoramic overview of Declerck and Reed (2001) based partly on the Cobuild and LOB corpora, very few of the existing typologies are based on real data or corpora. The *if* operator is however notoriously polysemous and context-sensitive, as is also the case for French *si* (Adam 2005; Achard-Bayle 2005), consequently limiting the usefulness of intuitive approaches. In order to evaluate the role of *if*-conditionals in discipline specific forms of argumentation a fully contextualised approach is we would contend essential. In Akatsuka's (1986) words, "conditionals are discourse-bound."

Similarly, to the best of our knowledge, few analysts tackling *if*-conditionals, apart from Rowley-Jolivet (2007), Ferguson (2001) and Facchinetti (2001), have even touched upon the question of genre. One of the basic postulates of a genre approach is that the communicative aims and context of the discourse impact on both the overall textual organization and the syntactic strategies adopted by writers and speakers. Just as the use of pseudo-cleft structures, for example (Rowley-Jolivet & Carter-Thomas 2005), has been shown to respond to specific discourse objectives in the case of the conference presentation, the use of *if*-conditionals can be expected to respond to certain specific objectives of the specialized editorial.

The corpus-based genre perspective we have adopted therefore deals with complete 'texts', rather than decontextualised extracts. The individual conditional constructions collected are examined not only in relation to the

surrounding co-text but also in relation to the overall rhetorical aims of the two genres contrasted: the EDs and RAs.

Our approach is a bottom-up one. We begin by examining the verb forms employed in the *if P, Q* conditionals, comparing the use made of the canonical verb sequences and identifying the preferred verbal combinations in the two genres. We then focus on a number of variations observed in the basic *if P, Q* constructional pattern, involving the addition of specific lexemes or specific punctuation. Following Dancygier (1998), we take the view that conditional constructions are compositional in meaning. Different formal choices in the basic constructional pattern can be associated with specific functions and meanings, thereby constraining interpretation.

Throughout the analysis this focus on the formal features of *if*-conditionals will therefore be constantly related to the particular functions fulfilled by the construction in the genre and discourse context. The comparison between the RA and ED usages will help us to identify the form-function pairings particular to the editorials and in this way pinpoint some of the specific argument strategies implemented through use of the *if P, Q* forms.

3. Corpus

The corpus used for this study comprises 171 occurrences of *if*-conditionals taken from 74 editorials in two prestigious medical journals. These occurrences are contrasted with 119 occurrences of *if*-conditionals taken from 30 research articles on the same themes, again in leading medical journals. Although small in comparison with modern general corpora nowadays, our specialised corpus is we believe both large enough to be representative of this specialised discourse and small enough for us to implement the fully contextual approach we are advocating (Ghadessy & al 2001).

Although conditionality can be expressed in many ways, our study is restricted to *if* as the prototypical operator of conditionality in English. Other conditional subordinators were consequently ignored. Care was also taken to manually discard any occurrences where *if* was a subject or object clause (and the

equivalent of *whether*). However elliptical *if*-clauses (*if possible, if necessary*), a frequent feature in medical discourse, were included. The frequency of *if* per 1000 words of running text was calculated for both genres and the details of this breakdown are given below.

	Editorials	Research articles
# texts	74	30
# occ	171	119
# words	95,143	111,907
Ratio <i>if</i> /1000w.	1.8	1.06
Source ²	JCO & LO	JCO & IJRO

Table 1. Corpus

As Table 1 shows, *if*-conditionals are more frequent in the editorials than in the research articles. Our figures tally with those of Ferguson (2001) who found an identical ratio of 1.8 *if*-conditionals per 1000 words in medical EDs and a very similar 1.1 ratio in RAs. It would seem therefore that medical editorialists have greater recourse to *if*-clauses than RA authors. However, the precise form and use of these constructions remains to be verified. In the following sections we will look first at the verb forms in the basic *if P, Q* pattern and their meanings and then at constructional variants with the subsequent nuances they introduce.

4. Verb Forms

4.1 Canonical conditionals

Discussion of verb forms in conditionals is often restricted to three 'canonical' sequences, in which the verb forms index increasing degrees of hypotheticality: 1) present + future; 2) past + 'conditional'; 3) past perfect + 'conditional' perfect. As many analysts have pointed out (cf. Section 2

² The sources are: Journal of Clinical Oncology (JCO, 2003), International Journal of Radiation Oncology (IJRO, 2003), and The Lancet Oncology (LO, 2003-2004).

supra), these sequences give only a very partial picture of actual discourse use. Their frequency in our data is shown in Table 2.

	RA	ED	TOTAL
Canonical 1	2	18	20
Canonical 2	4	14	18
Canonical 3	1	5	6
All canonical forms (1, 2, 3)	7 (5.9%)	37 (21.6%)	44 (15.2%)
Total occ. Of <i>if</i> -conditionals	119	171	290

Table 2. 'Canonical' tense sequences in the 2 genres

As can be seen the EDs contain far more canonical forms than the RAs. This distributional difference can be largely explained by the importance of hypothesising and predicting in the editorials. Through such patterns editorialists fulfil their role of opinion-leaders, engaging in predictive, speculative or highly critical pronouncements on research claims or on the socio-economic and legislative environment of medicine.

All the type 1 canonicals in the editorials are used to make predictions concerning socio-economic issues such as the provision of medical services and their funding, legislation, developments in trials and drug marketing, and medical education.:

If the current reliance on screening continues to increase, then the demands on colonoscopists' time will become overstretched and the financial consequences will be too great for the US health-care system. (ED 1)

Unlike research investigations in RAs into the causes, diagnosis and treatment of disease, where certainty is much more difficult or even impossible to attain, in the economic or legislative domain, medical editorialists feel confident enough of causal relations to use predictive *if P, Q* clauses.

The greater recourse to type 2 and 3 canonicals, expressing varying degrees of hypotheticality, can likewise be explained by the argumentative aims of editorials:

“to raise questions, diagram problems, propose definitions and offer alternatives and/or solutions for future research, (...) examine, discuss and criticize.” (Salager-Meyer *et al.*, 1989: 153).

Medical editorials address ‘hot’ or controversial issues for which there is often no clear-cut solution, or confront results by different research teams which give rise to diverging interpretations. For all these hypothesising functions, *if*-clauses are an invaluable syntactic resource:

Are these sufficient data to accept the fact that carcinomatosis from gastrointestinal cancer can be cured in selected patients? If this were true, it would be a major step forward for oncology. Natural history studies suggest a survival of approximately 6 months. (ED 2)

The majority of Type 2 and all occurrences of Type 3 canonicals in the editorials are counterfactuals. Counterfactuals are a prime example of the role of *if* as a space-builder. This hypothetical thinking enables the speaker to envisage the possible consequences of situations which either did not in fact occur in the past or which do not currently hold (Akatsuka and Strauss 2000). The aim of this space-building will often be an evaluative one: if these counterfactual situations are entertained, it is in order to judge, criticise or, more rarely, to commend the actual decisions or behaviour of the actors involved. The reason why counterfactuals are found exclusively in the editorials and not in the RAs seems to lie in the different rhetorical aims of the two genres. Researchers could be considered to be undermining the strength of their research claims if they gave too much prominence to other hypothetical spaces: to what could or could not have been done in alternative approaches. Editorialists, in contrast, are not defending their own research claim. Counterfactuals enable them to express criticism of others’ work, or regret that a certain avenue was not explored:

In the context of previous trials in solid tumors that have failed to demonstrate an effect of maintenance therapy on survival, one needs to consider the question of what the likely outcome would have been if the primary end point of this study had been

survival, and the study had been continued despite the emergence of a statistically significant difference in progression-free survival. (ED 3)

In example 3 the editorialist criticises the study, which was stopped too soon to provide data on survival - the primary endpoint in oncology - and relativises its positive results.

The degree of tense backshifting in P indicates the degree of commitment to the likelihood of the counterfactual situation – the more backshifted the verb form, the greater the authorial distance. In (ED 3), the counter-evidence is extremely strong as the author is hypothesising about known, and hence irreversible past facts; type 3 canonicals are therefore used. In (ED 2), in contrast, tense backshifting is less marked as the ‘factual’ status of the assertion (that carcinomatosis from GI cancer can be cured), although questionable - as shown clearly by the preceding interrogative - cannot be entirely excluded at the time of writing, given the lack of data.

4.2 Other verb sequences

Although canonical forms play a significant role in the editorial, as Table 3 illustrates, the editorials as well as the research articles also reveal a rich variety of other verb combinations.

Verb sequence P + Q	ED	RA
Truncated forms	15.8% (27)	14.3% (17)
Past + past	1.8%(3)	51.2% (61)
Past + modal	7% (12)	3.4% (4)
Past perfect + past	0	3.4% (4)
Present + present	25.1(43)	8.4 (10)
Present + modal	22.2%(38)	7.5% (9)
Present + past	1.1% (2)	1.7% (2)
Others	5.3%(9)	4.2% (5)

All	78.3% (134)	94.1% (112)
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Table 3. Other Verb Sequences (excluding canonicals)

Both genres contain a number of what we have termed truncated forms, involving in the majority of cases partial or complete ellipsis of the P clause:

If clinically indicated, additional imaging studies were obtained (RA 1)

Such reduced verb forms allow the writer to achieve a greater economy of style. In the more argumentative discussion section of the RAs and particularly in editorials, they also enable the writer to confront different voices by briefly encapsulating certain hypotheses, before forcefully presenting their own viewpoint:

Thus, an important question to be pursued from the report of Gamis et al is whether DS-AML cases older than 2 years lack prior history of TMD and GATA1 mutations? If so, it would clearly indicate a different biologic origin and possibly a difference in response (ED 4)

However, in general, the RAs and EDs favour very different verb sequences. In the RAs, the majority of sequences involve a past tense in both the P and Q clauses. Authors use these *if*-clauses to refer to specific pieces of research carried out in their research teams:

The dose of paclitaxel was reduced by 20% if the patient had Grade 4 neutropenia that lasted >5 days (RA 2).

In the Editorials, in contrast, past tenses are rare; the argumentation is very much anchored in the present with nearly 50% of occurrences containing a present tense in one or both clauses. These forms are used to make generalisations and overviews (ED 5), emit hypotheses (ED 6) or to make rather authoritative pronouncements (ED 7):

Currently, the average life expectancy of a 75-year-old woman is nearly 12 years (17 years if she is healthy), and that of an 85-year-old woman is nearly 6 years (9.6 years if she is healthy). (ED 5)

If the results reported by Mellado et al are observed by other investigators, it is possible that detection of CMC could direct selection of high-risk patients for high-dose interferon therapy. (ED 6)

If the UK government's targets for health care are to be realised, the leadership needs to be bold. (ED 7)

In (ED 7), the *if to be* structure further suggests not only a projection into the future, but also an evaluation of the desirability of the projected action (Declerck & Reed 2001). However, in all three cases the present tenses are used as part of a commentary on the relevance of current practice rather than as part of any narrative focusing on a specific research project.

4.3 Modals

Medical discourse in general, as is well-known, is characterised by a high degree of hedging, in which modal forms play a large part (Salager-Meyer 1994; Adams-Smith 1984; Prince et al 1982). Vihla (1999) has also found modality to be even more marked in editorials than in RAs, a feature which she attributes to genre-dependent forms of argumentation. Whereas RA authors use 'experimental justification' for their arguments, basing their conclusions on empirical evidence, argumentation in editorials is 'interpretative', relying on the writer's personal interpretation and opinions. Our corpus reflects this trend. As Table 4 shows, modal verbs³ are extremely frequent in the ED subset: 62% of Q clauses contain a modal, compared to only 25% in the RAs.

Modals in Q	ED	RA
Total modal verbs ⁴	62% (106)	25% (30)

³ We have restricted our analysis here to modal verb forms in the main (Q) clause. Various types of modalising lexis are also however frequently exploited in the *if*-conditionals in our ED corpus (*it is possible that...*; *perhaps...*; *it is unlikely that...*; *we need to...*).

⁴ The modal forms in the Q clause encompass the following: *would, would have, will, may, may have, might, might have, could, can, must, should*.

Of which canonicals	21.6% (37)	5.9% (7)
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Table 4. Modals in the Q clause.

In addition to the 3 ‘canonicals’ discussed above (cf. Section 4.1), a wide range of modal values is found, but also with different distributions in the two genres. What has been called ‘dynamic’ modality (Palmer 1990) – referring to possibility or necessity that is imposed by circumstantial factors or a concrete situation – only appears with any frequency in the RAs, where evidential justification has more weight than the authors’ personal opinion:

If FU had to be discontinued because of toxicity, the investigator could continue with single-agent oxaliplatin. (RA 3)

Deontic modals however are extremely rare (2 occ.), indicating that RAs are not directly concerned with professional praxis.

In the editorials, in contrast, which bridge the gap between research and praxis, both epistemic and deontic modality is frequent. This frequent recourse to epistemic modality in *if*-clauses enables editorials to fulfil their metatextual role of evaluation, commenting on and assessing arguments expressed in previous texts, whilst at the same time making their own text more persuasive:

Such an approach is not new and might prove more acceptable if there were a plausible biologic rationale for using a particular clinical parameter. (ED 8)

Editorialists are expected to take a stand on issues and do not hesitate to make recommendations, with *must* being the most frequent choice here, and with slightly more hedged recommendations using *should*, *could*, *will* or *would*. Recommendations in the editorials concern two domains: firstly, legislative, social and financial aspects of medicine, or its socio-economic environment, where the writer is the spokesman for the medical community in its dealings with governments and institutions:

The legal situation in many countries needs to be clarified quickly, but this will only occur in a rational and sensible way if

evidence-based conclusions are used to formulate new legislation. (ED 9).

Secondly, recommendations concern desirable changes to, or improvements in, current medical practices and procedures:

If one accepts these treatments as valid, major changes in the management of cancer patients with peritoneal seeding must be considered. In this approach... (ED 10)

In this case the editorialist is giving advice not to outside partners, but to his medical peers.

5. Constructional variants of the *if P, Q* pattern in Editorials

So far, we have considered only the default expression of *if*-conditionals: *if P, Q*. Not only however do verb forms impact on conditional meaning, but there are also several other formal variants on the basic pattern, each of which imparts a particular shade of meaning. Lexemes such as *then*, *only*, and *even* can be added, and the interrogative form can be used in *Q* instead of the usual declarative⁵. Such variants occur with very different frequencies in the two genres: as can be seen in Table 5, they represent a significant proportion of all the *if*-conditionals in the editorials, accounting for 26% (44 occ.), against only 7.5% (9 occ.) in the RAs. They are, we contend, highly revealing about the argumentative strategies of the editorials. What several of these variants have in common is their potential for greater authorial control over readers' opinions, either by minimising the tentativeness usually associated with the *if*-clause, or by negotiating agreement between writer and reader through a subtle management of polyphony, while still preserving the reader's 'face' thanks to the polite and non-assertive value of *if*.

	RAs	Eds
<i>If</i> P, then Q	4	12

⁵ There are of number of other formal variants to the *If*P, *Q* pattern which will not be dealt with here: notably those related to clause ordering, the use of commas in writing and intonation in speech (cf. Dancygier 1998).

Q only <i>if</i> P	0	7
Even <i>if</i>	5	11
<i>If</i> P, Q?	0	14
TOTAL	9	44
	7.5%	26%

Table 5. Constructional variants of *if*-conditionals in the editorials

5.1 If P, then Q

As Dancygier (1998) and Dancygier and Sweetser (1997) have argued, the presence of *then* in the Q-clause implies that P is the unique space in which Q is located or is valid, thereby excluding competing spaces and as a result constraining the interpretation that the reader can put on the *if* construction. In forcing a causal or strong dependency relation between the two clauses, the *if P, then Q* construction is more categorical than the simple *if P, Q* one. It implies an authorial *ethos* in which the text producer feels entitled to impose his reasoning process on the receiver. It is interesting to note, therefore, that in the RA, where the adoption of such a position of superiority by the author could be perceived as presumptuous, there are very few occurrences of the *if P, then Q* pattern, whereas one finds 12 occurrences in the editorials:

If the provision of such services is not kept in touch with the increasing number of cancer survivors then the importance of quality of life in cancer will no longer be sustainable (ED 11)

Medical editorialists seem to have few qualms about adopting this type of authoritative voice, both towards outside partners (ED11) and towards their medical peers (ED12):

If, in addition, we do not have convincing evidence of antitumor responses, then we have little to guide our vaccine development (ED 12).

As Régent has pointed out in a contrastive study of French and English medical editorials:

Les éditoriaux sont le plus souvent demandés à des chercheurs ou des spécialistes dont la compétence est reconnue dans leur

domaine ... l'auteur se place d'emblée en position de détenteur d'un savoir... (1992: 72).

5.2 Q only if P (IFF)

This constructional variant occurs only in the editorials, as such an authorial stance would also undoubtedly be considered overbearing in the RAs.

The additional meaning imparted to the construction by this lexeme is similar to that of *then*, in that *only* excludes all other conditions apart from the one selected by the author, operating a closure or bounding of the theoretically open space of P, and again imposing a single interpretation on the reader. Thanks to the restrictive meaning of *only*, P is specified as the sufficient and necessary condition for Q.

The project will succeed only if there are enough adequately trained radiologists to operate the equipment and interpret the results (ED 13)

The 'if and only if' interpretation is a pragmatic implicature of many ordinary *if P, Q* utterances, that is when the *only* is not voiced, and is generally referred to as conditional perfection (Horn 2000). As with the *if P, then Q* construction, *Q only if P* positions the writer as someone authoritative, licensed to make definitive statements which foreclose all the other possible options that the reader might be tempted to entertain.

5.3 Even if P, Q and Q (,) even if P

The addition of *even* confers a concessive meaning on the *if*-conditional. The construction without *even* can sometimes be interpreted concessively, depending on the assumptions held by the interlocutors, as in Dancygier's example (1998:165): *I would marry you if you were a monster from Mars*. Given the shared assumption that Martian monsters do not make attractive husbands, a concessive interpretation would be the normal one here. We have however only 1 occurrence of such 'implicit' concessive conditionals in our data; in all the other cases, the concessive relation is explicitly signalled by the presence of *even*.

Concessive conditionals are a very useful structure in argumentative discourse in general, as they enable the author to forestall objections to his argument. By using the form *Even if P, Q* or *Q even if P*, the author asserts Q whether the possible counter-argument in P is the case or not; conceding or appearing to concede P in fact strengthens the claim in Q, which is asserted to hold whatever the status of P. A few concessive conditionals are found in the RAs, almost exclusively in the Discussion section. However, they are more common in the EDs, where editorialists frequently confront and assess the relative merits of different arguments, as in the following example:

Even if a ban on smoking in public places only reduced the number of passive smokers presenting with tobacco-related diseases, a substantial saving would be made, both in human and economic terms. (ED 14)

5.4 Interrogative Q

The use of an interrogative form in Q, rather than the usual declarative, is a strong manifestation of attitudinal marking by the author, and occurs only in the editorials (cf. Table 5).

Questions in general are much more frequent in editorials, as befits their objective of raising controversial issues. Webber (1994), in a study of questions in different medical journal genres, found that editorials and reviews combined contained 9 times more interrogatives than the RAs. Hyland (2002) comparing questions in RAs, textbooks, and student reports, found them to be over twice as frequent in textbooks as in RAs, and proposed the following explanations for this difference: questions are dialogic, involving the reader in the text and in the author's argument, and are more overtly interactional; they also however exert a considerable degree of discourse control, since the questions asked are the ones chosen by the author and to which he or she has the answers, and are often used in fact to lead the reader in a particular direction. In the RA, questions would be felt to be condescending by many readers, as an egalitarian stance is expected. However, as

already pointed out above, the writer-reader relation in editorials is also often an unequal one.

Both of these aspects – interaction and control – are apparent in the use that medical editorialists make of the *if P, Q?* construction, and indicate very different argumentative strategies to those of RAs. Conditional questions, strategically placed in the opening (example 15) or concluding paragraph of the editorial, directly address the readers, involving them in a dialogue on a professional problem and inviting them to speculate on solutions in the hypothetical space opened up by *if*. *A number of barriers to recruitment [of patients in clinical trials] have been identified, with no singular, simple solution forthcoming. But if incremental gains are to be made, how could our current models of clinical trials expand to include significantly more patients?* (ED 15)

In addition to its interactional utility, the *if P, Q?* variant can also be used to exert editorial control. A first point to note is that all the P-clauses are initial; the interrogative in Q is therefore performed against the background already set up by P. The function of the initial P-clause is to encapsulate certain assumptions that can be made from the preceding stretch of discourse, in order to provide a warrant for the question itself. This encapsulation can be done, however, either with a cooperative or with a critical intent, and the presuppositions of P are not the same in each case. An example of the former is:

[after a lengthy discussion of the advantages of combination therapy over single-agent therapy] *If multiple agents are to be used, which other drugs have clear efficacy against PCNSL?* (ED 16)

If P sums up the shared writer-reader assumptions from the preceding discourse, and the question in Q is one which the reader is likely to wish to ask at this juncture. It can be glossed as: *If* [as you the reader and I the writer, now agree, though out of politeness I don't presume to assert that we agree] we need to use multiple agents.

In other cases, however, this encapsulation has the critical intent of enabling the author to question, in Q, the

assumptions in P. The writer summons into the text another voice in P, by recalling the claims of others, and then proceeds in Q to question these claims, both syntactically and rhetorically speaking. The following example could be glossed as ‘If [as authors X and Y claim, an incorrect claim in my opinion so one that I do not assert] a graft-versus-lymphoma effect exists, ... ‘: *After the serious limitations of this analysis are taken into careful consideration, the question remains: If a graft-versus-lymphoma effect does exist, why was evidence of it not observed in this analysis? (ED 17)*

From a polyphonic perspective, it is clear that the author does not take responsibility for the point of view that “a graft-versus-lymphoma effects exists”: the co-text is highly negative (*the serious limitations of this analysis*), the use of the *if* operator signifies that the concept evoked is non-assertable, adding the emphatic auxiliary *does* further heightens the doubt, and the negative question in Q directly challenges the contested claim. The *if P, Q?* construction has a clear refutative function here.

The above examples illustrate how the *if P, Q?* structure can be used persuasively to negotiate agreement between writer and reader and confront different points of view. The degree of control exercised by the editorialist over the dialogue with the reader can also on occasion be even greater:

If "fit elderly" patients can tolerate aggressive multimodality therapy, does this mean that all older patients should be treated this way? The answer is no. (ED18)

By answering his own question, the editorialist explicitly funnels the debate, adopting a clear didactic stance towards his reader.

6. Conclusion

Our study has suggested that *if*-conditionals in medical editorials are exploited in a very genre-specific way. Although research articles and editorials can both be classified as argumentative professional discourse, their argument strategies, as illustrated through the form and use of *if*-conditionals, are very different. *If*-conditionals in medical EDs make

considerably more use of the so-called canonical conditional forms than the RAs, principally for making predictions and for hypothesising. Other verb sequences too are exploited very differently in the two genres. Whereas RA authors favour past tense sequences for reporting specific pieces of research, in EDs the immediacy of the present tenses is preferred. Likewise both genres make very different use of modal verbs. Formal variations on the basic *If P, Q* pattern are also exploited very differently in the RAs and EDs. Our medical editorials make consistently more use of the lexical variants: *if P, then Q, Q only if P, even if* and the interrogative form in Q (*If P, Q?*) than the RAs. How can all these formal differences be accounted for? What explanations can be given for this very specific use of *if*-conditionals in the medical editorials?

Answers to these questions can be related to the linguistic versatility of *if*-conditionals and also to the complex nature of the specialised editorials. At the outset of this study, we asked ourselves whether medical editorials had multiple agendas. We would argue that three different agendas can indeed be discerned, each addressed to a distinct readership and with a distinct communicative purpose: a research-oriented agenda, a praxis-oriented agenda, and a socio-political one. The *if*-conditional adapts itself to the different argumentative strategies implemented in each:

“The conditional ... is not a creature of constant hue, but chameleon-like, takes on the colour of its surroundings.” (Watson & Johnson-Laird 1972:92, quoted in Caron 1979)

Firstly, these specialised editorials are published in research journals, where they co-occur with RAs presenting cutting-edge medical research. Unlike hard sciences, however, medicine is as much an art as a science: conclusions are based to a large extent on observational evidence and probabilistic reasoning, in which the interpretations of research results can vary. Moreover, its ultimate goal is the treatment of patients, so the applicability of research to real-world situations needs to be carefully examined. Editorials, which are situated at the interface between research and praxis, have an important role to play here in assessing the relative merits of research claims and

hypothesising about the possible consequences or follow-up to give to research findings. Compared to the much slower process of publication in textbooks and professional manuals, editorials represent the 'fast lane' in operating the transition from research to treatment, thus enhancing the reactivity of the field. In accomplishing this research-oriented agenda of the editorial genre, certain specific possibilities of the *if*-conditional construction that we have shown to be typical of editorials are particularly relevant: 'canonical' conditionals 2 and 3 enable the author to open up a counterfactual space and propose alternatives to the researchers' methods, while the *if P, Q?* variant directly questions the claims put forward or the feasibility of clinical implementation; the prevalence of epistemic modality in Q and the fundamental non-assertibility of the *if*-conditional are an invaluable resource in making suppositions and interpreting; the polyphonic potential of concessive conditionals (with *even if*), and truncated or full forms which encapsulate other points of view, enable the writer to confront different voices, while the optionality associated with *if*-clauses facilitate the management of the research readership's 'face'.

In addition to this research readership, however, editorials are also addressed to medical practitioners, and have a praxis-oriented agenda. The breakthroughs of medical research, if applied incautiously, can have deleterious or even fatal consequences in practice, so need to be implemented with proper caution, in strict conformity with the rigorous ethical and clinical rules of conduct of the profession. Medicine as a body regulates its own conduct and requires all practitioners to observe the deontology of the profession; prescriptive pronouncements and recommendations addressed to peers and practitioners in the profession itself are therefore admissible or even necessary in this discipline, in order to ensure that these norms are respected in clinical praxis. As noted at several points in this study, editorialists have no compunction about making such authoritative statements to their professional peers: variants on the *if*-conditional construction, such as *if P, then Q*, *Q only if P* enable them to exercise a high degree of authorial

control, while the frequent use of deontic modality and recommendations, by showing that medical practice is norm-governed action, reinforce the practitioners' sense of professional identity. The interactional role of interrogative *if*-conditionals can also be interpreted as a discursive sign of the social role of editorials within the profession, as by using questions to engage in a dialogue with readers, editorialists involve their readers in unresolved or controversial issues that the medical community as a whole needs to address.

Beyond these two professional groups, namely medical researchers and practitioners, the editorials of reputed journals are also addressed to socially influential actors outside or on the periphery of the medical profession – such as governments, hospital administrators and pharmaceutical companies – and therefore have a socio-political agenda or axe to grind. Questions such as the public funding of medicine, medical education and training, laws regulating cloning and biomedical research, pharmaceutical R&D into new drugs, etc. all have a direct impact on medicine, and depend on decisions taken by institutions or professional bodies not directly controlled by the medical profession itself. The importance of this socio-political agenda in the communicative aims of the editorials is apparent in several formal features of *if*-conditionals: canonical type 1, which occurs frequently in the editorials, is used exclusively to make categorical predictions about social, economic and political problems; the authoritative stance of constructional variants such as *if P, then Q* or *Q only if P* are often wielded to defend the interests of the profession; the prevalence of present tense sequences, compared to the past tenses which predominate in the RAs, clearly indicates a genre oriented towards present and future action and towards what needs to be done; and the recourse to persuasive, less academically-grounded forms of argumentation than those found in the RA makes these specialised editorials much more accessible to the layman.

In order to accomplish these multiple agendas, and to formulate their arguments in ways that each of these three readerships will find convincing and appropriate, medical

editorialists need to customise their argumentative strategies – to be in turn cooperative, critical, speculative, prescriptive or admonitory. The versatility of the *if*-conditional construction means that it can successfully lend itself to these different agendas, thanks to the subtle nuances that choices in various formal features provide. As van Dijk succinctly remarks, “Many of the discursive strategies of ideological expression are formal” (van Dijk 1998:45).

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