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Commentary on Abrahamson and Rubin (2012) "Discourse structure differences in lay and professional health communication", *Journal of Documentation*, Vol. 68 No. 6, pp. 826-851

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Abstract

Purpose – The purpose of this paper is to criticise the paper by Jennie A. Abrahamson and Victoria L. Rubin (2012) "Discourse structure differences in lay and professional health communication", *Journal of Documentation*, Vol. 68 No. 6, pp. 826-851.

Design/methodology/approach – The author reviewed the antecedents of Rhetorical Structure Theory (RST) in discourse analysis, and paid close attention to the differences between the original formulation of RST, later formulations of the RST model and the application of RST in this paper. The author also reviewed the literature on physician-patient communication, and patient-patient support to contextualise the findings of Abrahamson and Rubin.

Findings – The paper shows evidence of over-simplification of RST since its initial formulation. Next, the Motivation relationship in the original Mann/Thompson formulation of RST appears problematic. This makes the authors' RST findings that patient-patient (or consumer-consumer) information sharing appear to be more effective than physician-consumer information sharing rather tenuous. An important additional flaw is that there was only one physician participant in this study. A practical limitation to the study is that physicians mostly interact face-to-face with patients and use of consumer advice web sites may not fit well with the current practice of medicine.

Research limitations/implications – The author had limited examples in the paper to examine how the authors had categorised the binary unit relationships.

Originality/value – RST is promising for discourse analysis of information advice web sites but simplifications in its application can lead to unwarranted claims.

Keywords Health care, Language, Communication

Paper type Viewpoint

Corrigendum

It has come to our attention that Alexander H. Urquhart was not named as an author of "Commentary on Abrahamson and Rubin (2012) 'Discourse structure differences in lay and professional health communication', *Journal of Documentation*, Vol. 68 No. 6, pp. 826-851" which was published in the *Journal of Documentation*, Vol. 71 No. 2, 2014. This occurred through an author and Publisher error. The authors and the Publisher

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sincerely apologise for this. The additional author attribution for this article has now been added to the electronic version of the article.

We were both interested in this paper as the authors use methods that interest one of us (AU), for a health information and communication topic, an area of interest to the other (CU). Closer reading and discussion of the article raised some concerns which prompted us to write this commentary.

The article uses Rhetorical Structure Theory (RST) to examine online discourse, both doctor to consumer and consumer to consumer, and suggests that the consumer to consumer advice texts may be more efficient. RST was developed in the 1980s by Mann and Thompson (1988) and has since been widely used. In RST, Elementary Discourse Units (EDUs), generally grammatical clauses, are grouped in pairs, with one being the Nucleus, and the other the Satellite. Each binary unit is then assigned a relationship, e.g. Elaboration, Evidence, Concessive, the relationships being described by the Definition section of the "theory". These pairs are then arranged in a hierarchical structure, shown by means of a tree diagram.

It seems slightly pretentious to describe the above as a "theory", since it lacks many aspects of what a theory would include. It is, in fact, a model probably best suited to describe the structure of certain kinds of written text. It is far from being original and has its roots in work carried out at least as far back as the 1960s. Binary rhetorical relationships are common in such work. For example, Thomas (1968) has Main Theme: Elaboration/Illustration. Winter (undated) has General: Particular, Hypothetical: Real; Denial: Correction. Urquhart (1976) uses Statement/: Cause; Assertion: Substantiation/Exemplification/Concession. Meyer (1975) and Urquhart both note that discourse structure can be hierarchical, while Crothers (1972) and Meyer use tree diagrams to illustrate it. Thomas (1968) uses flow diagrams, which are in certain respects superior. The distinction between subject matter and presentational relations made in RST is very similar to Grimes' distinction, (Grimes, 1975) followed by Meyer, between lexical and rhetorical predicates. The definition of representational relationships made by Mann and Thompson is again very similar to the logical principles put forward by Lackstrom *et al.* (1973). One could continue pointing out similarities. Given all this, it is odd to be told by Taboada and Mann (2006, pp. 424-425) in an article reviewing RST, that: "RST was developed without strong links to any previous descriptive tradition". Particularly odd when in an earlier publication, again referring to the genesis of RST, Mann and Thompson (1988) cite previous research which had influenced it, including Grimes, Crothers, Winter, Hoey, and Meyer. Perhaps in the time between the influence of the linguist (Thompson) was forgotten.

RST differs from the studies mentioned above first by being much more comprehensive: there are at least 24 relationships. It also differs in the attention paid to distinguishing and characterising relationships, which is covered in the Definitions section (see Mann and Thompson, 1988, pp. 249-255). Most previous analyses were content to label relationships as, e.g. Elaboration, or Concession, and leave it at that. There were some attempts to deal with the problem. Labov and Waletsky (1967) define Narrative Units in terms of limitations on ordering in the text; Lackstrom *et al.* argued that some statements represented claims, which were judged unlikely to be accepted without the provision of Evidence; Urquhart distinguished between Substantiation and Exemplification on the grounds that the latter implied a set. However, there is no doubt that the definitions in RST are a major contribution to discourse analysis, making analyses less dependent on intuition and more transparent.

The present study

The study claims that it is original as being the first to use discourse analysis, as opposed to studies of, e.g. Lexis, to analyse medical online texts. If this is so, then one can only wonder about the gap. In most other fields, studies of text purely in terms of vocabulary have long since been superseded. The literature review mentions some research on lay vs professional discourse in medicine – and there is later relevant research by one of cited authors (Bromme) on an analysis of health-related internet sites (Jucks and Bromme, 2007; Jucks *et al.*, 2008) as online health advice and diagrams are analysed.

However, the article contains little reference to the vast amount of literature on professional-patient communication which has traditionally happened face-to-face. It seems strange not to mention this, and one would expect at least a mention of the main research approaches that have been used to analyse doctor-patient interaction. Heritage and Maynard (2006) in an overview of the previous 30 years of research, discuss approaches such as process analysis, ethnographic observation and discourse analysis, and conversation analysis. More importantly they root their discussions in an understanding of the practice of medicine (as a social system). This is fundamental to interpreting what is, or might be happening in the encounter between doctor and patient, whether this is in face-to-face consultation, a telephone consultation or a response to a query on a bulletin board.

As far as the relation between RST and the paper are concerned, there are signs of a degradation in the presentation and application of the model since it was first produced. For example, discussing the nucleus, Taboada and Mann (2006) say:

> The satellite is often incomprehensible without the nucleus, whereas a text where the satellites have been deleted **can be understood to a certain extent** (p. 427, our emphasis).

In contrast, the present article states:

"A nucleus can stand alone as comprehensible" (p. 831), thus omitting the careful hedging of the earlier article. Discussing units, Mann and Thompson say:

> In our analyses, units are essentially clauses, except that clausal subjects and complements and restrictive relative clauses are considered as parts of their host clause units rather than as separate units.

which is clear and comprehensible. The present article, on the other hand, defines an EDU as "each sentence or its part" (p. 831), which is largely meaningless. To be charitable, this may be a misprint. However, on this point, Taboada and Mann also seem to be confused. Discussing the application of RST, they list on p. 425 the initial EDU's of an analysis, namely 1. an NP (the title), 2 and 4, subordinate clauses, and 3. the main clause. Yet on p. 429 they state:

> […] each independent clause, along with all of its dependencies of any sort, constitutes a unit.

If "independent clause" here equals grammatical sentence, then in written texts most EDU's would be orthographic sentences. And the four EDU's they provide earlier would be reduced to two, one of which would be an NP. One is tempted to suspect that the expert linguistic input to the earlier articles is being missed at times like this. We notice also that Taboada and Mann include an NP as a unit, although the method, as set out by Mann and Thompson, appears to lack any normalisation procedure for converting non-clausal structures into EDU's.

We have already said that it is the definitions of relations which distinguish RST from earlier work. This is clearly not the place to examine these definitions or the

relations they define. However, one part of the analysis must be commented on. The relationship is Motivation, to which the authors attach particular importance in their conclusions. The text is from a physician, and begins:

> Email me at (address omitted) and I will forward a glycemic index and a boat load of very useful information.

Abrahamson and Rubin analyse this as a case of Motivation, with "Email me at […]" the nucleus and "I will forward […] etc." as the satellite. As a case of Motivation, it belongs to the class of relationships which Mann and Thompson label "presentational". This is line with Mann and Thompson's distinction between subject-matter relationships, which relate parts of the subject matter of the text, and presentational relationships, which facilitate the presentation process itself. Motivation is classed as presentational, since:

> […] the nucleus presents an action in which R is the actor, and comprehending S increases R's desire to perform the action.

But while the analysis appears to be correct in terms of M and T's model, it seems to impose an odd perspective on the text. "Nuclei are considered as the most important parts of a text, whereas satellites […] are secondary" (Taboada and Mann, 2006). If "email me […]" as the nucleus is the main part of the doctor's message, then it seems to us that the text can be paraphrased, only semi-facetiously, as:

> Gosh, gee, I really really want you to send me an email. Now, what can I do to motivate you? Tell you what. If you do, I will forward a glycemic index […].

On the other hand, if you believe that "I will forward […] etc." is the most important part of the message, then we might chose the following paraphrase:

> (You're worried about diabetes). I will forward you a glycemic index and a boatload of useful information. Just send an email […].

In this paraphrase, "I will forward […]" is the nucleus, while "send an email" looks like a minor conditional. And it might be significant that the original text can easily be paraphrased as:

> If you send an email, I will forward you […].

So it looks as if Condition is a more satisfactory relationship here. However, in M and T, Condition is a subject-matter relationship. At the least, it looks to us as if Motivation needs to be looked at again, which is important since the writers in their conclusions lay stress on the importance of the Motivation relationship.

We shall return to the authors' use of Motivation later. Before that, we must comment on features of the article's methodology and data. First, the account of the data which was analysed is, to say the least, confusing. There were ten physician and ten consumer answers (p. 837). ***The consumer answers were contributed by 14 unique authors (two answers on average per consumer) with 11 single answers and 3 productive authors*** (p. 837, our emphasis). Would someone explain this, please? How can 14 authors produce ten answers, particularly since there were two answers per consumer? What is the relationship between the 14 unique authors and the three productive authors?

But leaving this confusion behind, there is a feature of the data collection which transcends just a bit of a muddle. Clearly stated is the fact that the physician answers

were contributed by **a single, female physician** (our emphasis), a diabetes specialist (p. 837). Now, in our lives, we have known quite a few female doctors. Some have been competent, some less so. Some have been charming, one or two anything but. And we are still excluding all the men. Clearly we cannot make any generalisations on the basis of data from one female doctor for physician communication. Even for a pilot study, language experiments would require data from more than one individual. Moreover, if the authors had consulted the general literature on physician-patient communication they would find a wealth of research on the differences among physicians, and the possible influences of gender. There are even systematic reviews on the topic. For example, Sandhu *et al.* (2009) examine the impact of different gender dyads (male patient/female doctor, male doctor/male patient and so on) on communication and conclude (on the basis of ten included studies) that although female-female dyads were the most patient centred, and consultations were longer, these consultations contained the most biomedical talk. This was not expected. An earlier meta-analytic review of gender effects (Roter *et al.*, 2002) did not find any different in the amount or quality of biomedical information given (but did not specifically consider the dyad effect). The authors of this paper state in their limitations that "it will also be important in future work to include multiple physician "voices" in the physician discourse" (p. 846). We would settle for more physicians – lots of them.

Finally, we turn to the article's discussion of the implications of the findings. Analysis using RST showed that the consumer answers included more presentational relations that those of the physician. They included, for example, 42 instances of Motivation (presentational), as opposed to 11 of Elaboration. The physician's answers, on the other hand, contained only four motivational relations, as opposed to 31 of elaboration.

On the basis of this, the authors claim (tentatively) that consumer answers are better at altering behaviour than physician answers. The following quotations are representative:

> Our findings suggest that consumer answers may be more effective at facilitating healthy behaviour in fellow consumers than physicians.
>
> RST presentational relationships, because of their emphasis on increasing readers' desire, belief or ability to perform actions, may therefore be useful in increasing self-efficacy.
>
> In other words, laypeople/consumers may be more effective at inspiring healthy behaviour.

While all these statements are qualified, underlying them seems to be that part of Mann and Thompson's descriptions which describe effects on the reader. In other words, the writer's intention to produce a certain effect on the reader can to some extent be assumed to be successful. But such an assumption is surely false. A reader may recognise writer's intention, but reject it. For example, given the following text:

> Mrs Thatcher was worse than Pol Pot. She deprived school children of their free milk.

while many in the ranks of British education would unquestionably agree, others might well query whether the evidence provided was sufficient to justify the assertion about Mrs Thatcher's wickedness. We simply cannot assume that readers will cooperate with writers in this way.

A single analyst, or preferably more than one, can come to tentative agreement on a writer's intention, what Thomas and Augstein (1972) called "shared subjective meaning". But to ascertain whether readers act or think in accordance with a text

message requires empirical experiments. We find no evidence in the present study that such experiments have taken place.

It rather looks as if this is another instance in this article of the original ideas being degraded. It is true that in Mann and Thompson, the "effects" are stated quite baldly, e.g., for Motivation, "R's desire to perform action present in N is increased" (p. 274). But they make it clear that this is a form of shorthand:

> […] the statement "Comprehending S and the incompatibility between N and S increases R's positive regard for N" appears in the definition of the Antithesis relation. A more explicit, but equivalent, statement would be: It is plausible to the analyst that it is plausible to the writer that comprehending S and the incompatibility between N and S would increase R's positive regard for N (p. 246).

In other words, a definition phrased as "R's desire is increased" is shorthand for a much more qualified description. The generalisations which Abrahamson and Rubin make on the basis of their results are unjustified, and possibly in the health field, potentially dangerous. Patient-patient support, and "patient-centred practice" seem worthy ideas in principle, and while few among us will not have been irritated by "know-it all" doctors, there are dangers in swinging too far in the other direction. Patients may know about the experience of living with a condition, but the doctor will have technical knowledge about treatment. Dixon-Woods (2001), in an analysis of the published discourses in patient information leaflets, notes the problems of romanticising patient empowerment. There are, however, recognised problems with information leaflets that are oriented towards patient education (the passive information transfer model). Alternatives include "expert patient" programmes for chronic disease management, in which expert patients provide advice to other patients. These programmes seem to improve the self-efficacy of patients supported by those who have more experience of the condition, but the changes are generally small, and there appears to be little effect on symptoms or use of health care services (Griffiths *et al.*, 2007). Perhaps for a chronic condition such as diabetes, there are limits to the amount of change that could be expected. Patients do often appreciate the support of other patients, but the main effects seem to be on self-efficacy and psychology – they feel happier about managing their condition. That does not mean that they actually change how they manage their condition or take their medicine more regularly. There is some evidence for effective strategies on improving patients' use of medications, but clearly there is no silver bullet that works consistently for all patient groups and all conditions (Ryan *et al.*, 2011). If there were silver bullets, there would be no need for the various health promotion campaigns that governments use to encourage people to adopt healthier lifestyles.

The article emphasises the novelty of its approach for doctor-patient interaction, but the RST as applied seems to ignore the effects of accepted doctor and patient roles. Doctors treat patients according to general technical standards (with an emphasis now on evidence-based medicine), and doctors tend to have a technical focus on medical care, rather than emotional support. Over the past couple of decades, the dominance of medical authority, "doctor knows best", has been challenged. "Patient-centred practice" is the common model used in training doctors, although Pilnick and Dingwall (2011) point out that the asymmetry of the doctor-patient interaction seems remarkably persistent. They note that conversation analysis research suggests that patients may actively defer to doctors for two reasons: first, they want an accurate diagnosis and second, they want some successful treatment. Appearing to defer in this doctor-patient game may be the most efficient and effective strategy to meet this aim. The role of the

doctor is to diagnose, prescribe treatment and provide advice and education for patients. The role of the patient may be changing, but patients still need to provide information in the consultation between doctor and patient, understand the reasons for the prescribed treatment and comply with that treatment. The analysis presented in this paper seems to ignore these common assumptions, and the wealth of research evidence on patient and doctor interaction.

As far as the use of technology in health care is concerned, there are many trials and systematic reviews on telemedicine (for use in remote diagnosis, treatment and monitoring and education). If we focus on e-mail, as mentioned in the article, e-mail could be used to send information to patients, but there have been few high quality trials comparing e-mail to standard mail or usual patient care (Sawmynaden *et al.*, 2012). There are many medico-legal considerations in the use of e-mail by health professionals, and professionals may also be reluctant to spend time on e-mail that might be better spent on face-to-face patient care. Education may be combined with regular patient monitoring for patients with chronic conditions such as diabetes, to make the education more relevant. For example, patients with type 2 diabetes may be able to use a monitoring device at home to send relevant clinical data direct to their care provider. The care provider may provide advice tailored to needs, by telephone in person, or some sort of interactive voice response, or automatic e-mail message that varies according to the changes in the clinical data. However, a Cochrane review of mobile phone messaging to support self-management of chronic illness indicated some positive effects for diabetes patients, but the change in self-management was small (de Jongh *et al.*, 2012).

In conclusion, we have several messages for the readers of *Journal of Documentation*. When borrowing a technique such as RST that has been used in other disciplines, it is vital to go back to the basics, and to check the limitations. Beware of simplifications and adaptations. If there is little apparent research on a topic, please reflect on possible reasons. Has there been research on other types or other aspects of the research problem? Interdisciplinary research is to be welcomed but some caution is required before making claims for new knowledge.

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