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Contemporary educational argumentation: a multimodal perspective

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Abstract

In contemporary educational contexts there is considerable variation in how argumentation works and what forms and styles it takes. Influencing factors include the educational purpose and task, the level of education, and the discipline or curriculum subject in which it occurs. This paper offers a theoretical framework and a set of multimodal analytical tools which can provide a rich and systematic account of such variation. Using naturalistic data from three different educational sites I illustrate how such a framework reveals the diverse ways in which students use language and other modes of meaning making as they engage in processes of argumentation. In particular, I consider how new technologies have caused shifts in the distribution of meaning across different semiotic modes (such as visual images, space, colour and graphics) and how this impacts upon both argumentation process and product. The educational implications of such changes are also considered.

Introduction

There is considerable variation in how argumentation works in educational contexts. It varies according to the educational purpose and task, the level of education and the discipline or curriculum subject in which it occurs. It varies too in relation to the social roles and relationships which obtain between those participating in the argument event (i.e. the writers, speakers, readers and listeners) and in relation to the mode or channel of communication. In this article I will show how such a diversity of contexts and purposes is manifested in an increasingly wide range of linguistic styles and structures. I will argue that it is important for both educators and learners to be aware of these styles and structures (in other words, the role of language) in both the process and products of argumentation. By *process* of argumentation I refer to the more fluid, ongoing and open ended exchange of alternative propositions and perspectives (as manifested, for example, in face to face discussions and informal text based conferencing). By *products* of argumentation I refer to the (at least temporarily) more fixed, static, and closed outcomes of the argumentation process (as manifested, for example, in formal essays and speeches).

A central aim of the article will be to propose a theoretical framework and a set of analytical tools which I will argue have enormous potential for providing both researchers and educators with a rich, systematic and educationally useful account of variation both in argumentation processes and in products. The core theoretical principles are ones that have been developed (and continue to be developed) within a branch of linguistics known as Systemic Functional Linguistics (Halliday 2004) and within the related field of multimodal studies (Kress and Van Leeuwen 1996, 2001). I will show how Systemic Functional Linguistics (SFL) provides a set of analytical tools for describing in detail how language (in this case the language of argumentation) works to make meaning in relation to context (in this case contexts of educational argumentation). A central tenet in SFL is that language is a resource for making meaning. Unlike traditional form-oriented approaches to language, SFL focuses not only on clause level grammar but on whole texts (or 'discourse'). It is therefore well adapted to analysing propositions as they are construed at clause (or sentence) level as well as analysing how they are built upon and elaborated to form stretches of cohesive and coherent written text or (co) constructed and negotiated

through dialogue and oral debate (see Coffin et al. 2009, for an accessible introduction to SFL).

Over the last decade or so, advances in technology have led to a proliferation of new electronic modes of communication. In turn these have led to a diversity of pedagogic spaces in which educational argumentation can be enacted. They include email discussion lists, electronic discussion boards, wikis, blogs, virtual 3D worlds and audio and video conferencing. In such sites, meaning making modes other than language (e.g. visual images, graphics, sound etc.) have begun to play an important role. For this reason, I propose to enrich the linguistic framework by combining it with the multimodal analytical framework first developed by Kress and Van Leuven (2001) and which shares the basic theoretical tenets of SFL. This is because a combined framework provides tools for investigating discourse which can account for the way in which language combines with other semiotic resources. In this paper I will be proposing that systemic functional-multimodal discourse analysis (as it has been referred to by O'Halloran 2008) is necessary if we wish to build a comprehensive understanding of how contemporary educational argumentation varies and how students engage in it ways that are more effective and less effective.

Variation in Educational Argumentation – the impact of new technologies

As stated above, one reason for the increased variety in forms of educational argumentation has been technological change. Over the last decade there has been a dramatic increase in access to computers and broadband and over the last five years there has been a series of new innovations in software developments and services which enable users to produce and share resources – rather than simply consume them (Web 2.0 is a shorthand term for these developments). Alongside ongoing technological innovation and improved access is the increase in numbers of school and university students who have been born into a digital world and who have therefore grown up with fundamentally different communicative practices to previous generations. Whilst terms such as ‘digital natives’ may overstate and over simplify the picture by suggesting a fluency with technology that does not necessarily apply to all (or even most) students, it nevertheless remains the case that for the ‘net generation’ there is an increasing blurriness about how and where people learn, and how and where they learn most effectively. Increasingly it seems that, at least for some, virtual experiences and activities on the internet may be a preferable knowledge source compared to traditional brick based learning. This has consequences for student motivation and preference for when and where they engage in processes of argumentation and where products of argumentation are disseminated. Humphrey’s research (2006, 2008), for example, shows how for adolescents online spaces are a major site for learning to engage in political and social activism and argumentation. And in these environments, semiotic resources other than language (e.g. visual images) come to the fore.

Another technology based reason for the recent expansion of different (multimodal) forms of argumentation is due to changes in the semiotic resources available for meaning making. Educational argumentation has, of course, always drawn on a wide variety of resources (e.g. language, images, gestures, posture, use of space etc) and, more generally, teaching and learning has always been what Kress et al. (2001) refer to as a ‘multimodal accomplishment’. However, increased ease and speed of access to different semiotic resources (e.g. video, image, audio) means quicker mixes, assembly, reassembly and distribution of these modes. In educational contexts, this is manifested in the increasingly

common use of multimodal interactive whiteboards (Gillen et al. 2007) and in new forms of assessment in which students can integrate into their written texts, visual images, audio archives and a wide variety of fonts, colours and other graphics.

It is important to be aware, however, that in contemporary pedagogic environments there is both expansion and contraction of semiotic resources. In comparison with face to face seminars and classrooms, for example, electronic discussion forums have reduced semiotic choice in the sense that there is an absence of intonation, facial expression, gaze, and posture as well as a lack of movement through, and arrangement in, space. However, there is expansion of choice (in many software programs) given the ease with which audio and video clips can be integrated as well as the availability of font, colour, emoticons and other graphics. And in 3D worlds, whilst intonation remains absent, facial expression, gaze, posture, and space are all available as meaning making devices (albeit through either computer programmed and, often, self conscious activation).

In sum, across a range of learning environments meaning is currently being distributed across different semiotic modes in different proportions than was the case five or ten years ago. This article shows the importance of recognising this shift since it has consequences for how students engage in argumentation as well as the textual outcomes of such a process. First, however, the focus will be variation in text structure and variation in the use of language.

Variation in Educational Argument – three examples

In order to illustrate some of ways in which argumentation varies in contemporary educational contexts, reproduced below are three text extracts which are representative of the kinds of argument based exchanges and products that occur in contemporary schools and universities. They demonstrate variation in both language structure and language choice, dimensions which I will discuss after first presenting each text and its context.

Text 1 – Electronic essay

Text 1 is the first section of an electronically produced essay written by Justin, a 14 year old history student in a UK school. It was produced in response to the question - *Was Hitler's leadership the main reason the Nazis came to power in 1933?* and was collected as part of an ESRC funded project.¹ Throughout the essay Justin used 12 point Times New Roman font. This was the choice of the majority of his fellow students. Of 21 essays collected from the same class, only four students used either different font types (Ariel, Papyrus and within a heading, Sylfaen), colours (one use of pale green in the body of text and one use of blue in heading) or font sizes (one use of 14 point size and 16 point size in the body and one use of 18 and 34 point size in the essay headings). Only one student opted for a completely different electronic format – PowerPoint slides.

In this essay I will discuss whether it was Hitler's leadership skills that got the Nazi party into power in 1933. I think that Hitler was a very powerful and influential leader but I believe there were many external factors which also helped the Nazis into power.

¹ ESRC ref: RES-000-22-1453. A report of the study is available at <http://www.esrcsocietytoday.ac.uk>. This details all aspects of the investigation To find out more about the project and ongoing work visit: <http://arguinginhistory.open.ac.uk/index.cfm>.

Hitler's organisational skills were very good he took every opportunity to raise money for the party and increase awareness and support for the Nazis. He organised lots of mass rallies to show authority which was lacking in Germany at that point, this made the German citizens support the party because of their power and confidence. He organised door to door leafleting to make people aware of the party and so they could find out about what they stood for...He told them what they wanted to hear and they believed him. But how did he make them believe him in the first place? The Germans surely wouldn't believe everything anyone said if they have no reason to believe them. It was leadership skills and his confident charisma. Hitler held many mass rallies where thousands even hundreds of thousands of people went to see Hitler speak. He was a very powerful and authoritative speaker which made people so confident about his leadership anything he said was well supported by his followers. By speaking confidently people thought he was good enough to be leader they automatically followed his every word.

(Justin, School 1)

Text 2 – Electronic text-based discussion

Text 2 (which was collected from the same ESRC project mentioned above) was produced by two 14 year old history students as part of an asynchronous electronic discussion forum² in a UK school. Discussion forums are increasingly commonplace within both schools and universities as well as in public spaces (linked, for example, to media or campaign websites). Such environments, it is argued, develop students' ability to navigate different points of view and so open up the possibilities for conceptual change (See Coffin and O'Halloran 2009 for further discussion). The topic for discussion was *The most important reason why the Nazis came to power in 1933 was that they had Hitler as their leader. Do you agree?*

(Please note that the font styles and sizes have been reproduced as per original but it is not possible to reproduce the colours used - in the original the first message was in black, the second message was in pink and the last one in blue. Note too how, in these environments, there is often a high tolerance for spelling and other errors and typos. Textese³ is also common).

Michael [nazis](#)

i think they⁴ still would have had a chance because maby someone else could have used the luck of the wall streert crash to there advantage but he might not have been able to use the technique of speech that hitlar had.

Elizabeth [nazis](#)

DO YOU THINK THAT IF ANYONE ELSE WOZ THE LEADER OF THE NAZI'S THAT

² Discussion forums are sometimes referred to as message boards, text based electronic conferencing or cmc. Common commercial packages which provide these forums are Blackboard, WebCT, First Class, and Moodle. In asynchronous conferences participants can post messages which may be responded to within minutes, hours or days – sometimes even weeks.

³ the use of abbreviations (e.g. *lol* for *laugh out loud*) and other forms of shorthand (such as *coz* instead of *because*, *dis* instead of *this*, etc.).

⁴ From reading previous messages *they* refers to the Nazis.

THEY WUD OF GOT THE SUPPORT AND THE ATTENTION OF THE GERMAN PUBLIC?

Michael [nazis](#)

i fink that if it was someone else they could have do the sane as hitlar and they might have differant abilitaties than just havin the ability to convince people with speech

Text 3 – Discussion in Second Life

Text 3 was produced by educational technology postgraduate students and their tutors who chose to meet on Philosophy Island in the 3D virtual world of Second Life in order to discuss concepts of identity. Second Life is an example of the Web 2.0 innovations referred to earlier. 3D worlds enable students (and teachers) to interact with each other in the form of ‘avatars’ or animated personas (with pseudonyms). These avatars can move through space and arguably provide the embodiment and ‘human’ presence absent in electronic discussion forums. Figure 1 provides a screen shot illustrating the 3D environment in which the Text 3 discussion took place.

An important feature of discussion in Second Life is that it is synchronous (though there may be some time lag) and, as in discussion forums, is text based. As a result of the speed of interaction textese is common and typos are perhaps even more frequent than in discussion boards. Depending on user preference and set up, the text or ‘chat’ either unfolds at the bottom of the screen with either each line appearing and disappearing as different speakers type and send messages or appears as a ‘chat history’ (referred to in the discussion below) in an expanded box in the left hand corner of the screen.

Kaiser Beaumont: ok...need to clarify for you all...multiplie identieis exist of course. but my avatar in this context is not a creation of an identity, or necessarily an expression of one. partially perhaps i.e., my avatar is male. but my ever so subtle and omplex identity is not going to be capturd by this avatar

Karriline Capalini: I'm finding it hard to keep track of where this discussion is going.....

Marie Arnold: but that's partly cos you've only spent a couple of hours being this avatar

Doko Naglo: go to histroty to see u chat history

Marie Arnold: you're not going to create a complex and subtle identity in a couple of hours

Doko Naglo: history

Marie Arnold: for example, you haven't buildt relationships with people you only know through SL

Marie Arnold: perhaps our identity only exists as it is refracted from others

Karriline Capalini: I think you can give hints of a complex identity - it's not a matter of creating it but giving some insight into its existence

Kaiser Beaumont: that's the point. i'm not going to create an identity...i have one already...my avatar is merely an avatar...a bunch of pixels which enable you a lot to locate me in this virtual world



Figure 1 Philosophy Island in Second Life: postgraduate discussion

Variation in the structure of argumentation

Having considered three quite distinct educational contexts in which argumentation currently occurs, this section will illustrate how SFL provides tools for analysing the different ways in which Texts 1-3 are structured.

The structure of Text 1 lends itself to genre analysis. In SFL genres are defined by Martin and Rose (2008, p.6) as “staged, goal oriented social processes” and genre analysis involves the identification of the functional stages and phases a text moves through in order to achieve its overall communicative goal (e.g. putting forward a case, explaining a natural phenomenon, telling a story). Text 1 (which would be categorized as a discussion genre in SFL) has been annotated (see below) to show the stages Issue, Argument and Position (marked in bold) and the phases (within the Argument stage) of Claim and Evidence (marked in italics). The essay finishes with a Position stage where Justin states his overall stance or thesis. (see Coffin 2004 for further discussion of canonical argument genres, from an SFL perspective).

Issue

In this essay I will discuss whether it was Hitler’s leadership skills that got the Nazi party into power in 1933. I think that Hitler was a very powerful and influential leader but I believe there were many external factors which also helped the Nazis into power.

Argument 1

Claim

Hitler’s organisational skills were very good.

Evidence

he took every opportunity to raise money for the party and increase awareness and support for the Nazis. He organised lots of mass rallies to show authority which was lacking in Germany at that point, this made the German citizens support the party because of their power and confidence. He organised door to door leafletting to make people aware of the party and so they could find out about what they stood for....

Argument 2

Claim

He told them what they wanted to hear and they believed him. But how did he make them believe him in the first place? The Germans surely wouldn't believe everything anyone said if they have no reason to believe them. It was leadership skills and his confident charisma.

Evidence

Hitler held many mass rallies where thousands even hundreds of thousands of people went to see Hitler speak. He was a very powerful and authoritative speaker which made people so confident about his leadership anything he said was well supported by his followers. By speaking confidently people thought he was good enough to be leader they automatically followed his every word.

[....]

Position

In conclusion I think that the external factors played a huge part in Hitler's rise to power but I don't believe that those factors would have helped anyone else to power. Hitler's leadership skills were very good and he took advantage of the external factors, if it had happened to a different leader I doubt it would have turned out as successful as this. I believe Hitler's leadership skills were the main reason for the Nazis coming to power in 1933.

(Justin, School 1)

The SFL notion of genre and generic stages as a method of mapping argument structures has much in common with Toulmin's (1958) foundational model (and the various educational applications thereof) in that it identifies similar elements of argumentation such as *Position* (cf. *claim* in the Toulmin model) and *Evidence* (cf. *data*). Unlike in the Toulmin model, however, emphasis is given to the grammatical and lexical expression (or 'realization') of argument genres (as I will go on to show in later sections). In addition, SFL modelling of text structure can account for different levels of abstraction in an argument hierarchy (hence the stages – Issue, Position (highest level of abstraction), Argument (middle level of abstraction), and Claim (lower level of abstraction)). Such a hierarchy works well in the analysis of canonical written argument genres. It can, however, be problematic when applied to spontaneous spoken interaction or to texts such as Text 2 and 3 which can be viewed as fusing 'chat' and writing and therefore falling somewhere along a speech-writing continuum (depending on participants' particular purposes and whether the posting of messages is synchronous or asynchronous etc.).

Indeed recent research studies investigating the structure of text-based discussions (Coffin 2007; Hewings et al. 2007) show that they have a distinct, intricate structure quite different to the more linear structures found in formal written text. For text-based conferencing, therefore, a method of analysis which fuses genre analysis with exchange structure analysis yields richer insights. Such a method is able to account for argumentation which combines short 'chatty', interactive turns with long, more written-

like postings. This method (as developed and implemented by Coffin and colleagues and discussed in full by North et al. 2007) is also able to handle a number of important features which characterise text-based discussion. These include disrupted sequencing, co-construction of claims and evidence and the presence of stages or ‘moves’ which have the potential to be integrated into the argument but which are not. It also accounts for moves which are more interpersonal or procedural in purpose rather than topic oriented, moves which are, it appears, essential for oiling the wheels of the discussion (Coffin, 2007). Texts 2 and 3 give a sense of the diversity and nature of moves commonly occurring in text-based discussion. Text 2, for instance, demonstrates the role of an argument prompt move (posted by Elizabeth) in developing Michael’s claim and supporting reasoning. Text 3 (annotated below) shows how Naglo’s procedural ‘help’ moves disrupt Arnold’s claim and supporting exemplification move:

		Discussion Moves
Doko Naglo	go to histroy to see u chat history	<i>Help</i>
Marie	you're not going to create a complex and	<i>Claim</i>
Arnold:	subtle identity in a couple of hours	
Doko Naglo:	history	<i>Help</i>
Marie	for example, you haven't buildt relationships	<i>Exemplification</i>
Arnold:	with people you only know through SL	

Variation in Language

Having looked at some of the different ways in which argumentation unfolds and the tools made available in SFL for analysing both the structure of traditional written text and the structure of synchronous and asynchronous text-based exchange, this section changes focus and considers variation in language. I discuss some of the key tenets and analytical tools in SFL, illustrating how they can illuminate language variation with reference to context and the meanings made by interlocutors.

A central tenet of SFL is that language is a resource for making three fundamental types of meaning. Grammar and lexis (lexicogrammar) enable speakers and writers to simultaneously:

- Represent the world (ideational meaning)
- Take a position on the world, interacting and aligning as needed (interpersonal meaning)
- Organize and package representations of the world (textual meaning)

In the analysis of the discourse of argumentation, an SFL approach considers how these general meanings are simultaneously instantiated in specific texts both at the level of a clause and at the level of a whole text. To illustrate this point at clause level take the following clause complex (extracted from Ryan’s conference message in Text 2):

i think they still would have had a chance because maby someone else could have used the luck of the wall streert crash to there advantage

Simultaneously Ryan’s choice of lexicogrammar serves to

- represent past events: the chance for the Nazis to come to power even with a different leader who could also have used the Wall St. Crash to their advantage

(*ideational meaning* as construed through *subjects, objects, causal conjunction, lexis*)

- present a point of view: the claim is tentative and open to negotiation (*interpersonal meaning* as construed through the modal resources of *I think, maybe, could*)
- link different parts of the message together: the word *still* signals that the writer is countering an expectation built up in previous messages (*textual meaning*).

Another key principle in SFL theory is that language and communication are systematically related to key aspects of the context. It is posited that there are three main contextual variables – field, tenor and mode – which are related to the three kinds of meaning discussed above. Field is related to ideational meaning, tenor to interpersonal meaning and mode to textual meaning. In turn, each of the contextual variables and associated meanings are systematically related to language use. Thus by analysing the language of Text 2, we can draw a number of deductions about its context.

To illustrate this point, the following is a field, tenor and mode analysis of Text 2. It is based on a systematic linguistic analysis⁵ of the ideational, interpersonal and textual meanings made by the participants through their choices in grammatical and lexical resources.

Field, Tenor and Mode analysis of Text 2 (based on linguistic analysis)

Field

- the social activity taking place (*a discussion about historical events within the secondary school curriculum*)
- the topic being discussed (*whether or not the Nazis would have gained power without Hitler as their leader*)
- the degree of specialisation (*some specialised knowledge of key historical events e.g. Wall St. Crash*)
- the angle of representation (*the Nazis and the imagined replacement leader for Hitler are put in the position of agents responsible for exploiting opportunities*)

Tenor

- the social roles and relative social status in terms of power, expertise or authority (*both participants appear to have equal power and authority although Elizabeth's probing question casts her into a teacherly role*)
- the social distance, i.e. the degree of connection or closeness (*no obvious social distance*)
- speaker/writer persona, i.e. general stance and assumed degree of alignment/agreement between interlocutors (*Ryan does not assume that other students are aligned with his view – hence he supports his claim and opens it up – through his use of modality - to negotiation*)

Mode

- the degree of interactivity (*this is a highly interactive interaction*)
- the degree of spontaneity (*this is a reasonably spontaneous, unplanned interaction*)

⁵ For reasons of space it is not possible to include the detail of the linguistic analysis)

- the communicative distance in time and space from the events discussed, i.e. whether language accompanies action or constitutes the text (*language constitutes the text*)
- the role of language, i.e. the degree to which it interacts with other meaning-making (**semiotic**) resources such as visual images, gesture etc. (*There are other semiotic resources being drawn on e.g. colour, font style and size*)

Taking into account the key parameters of field, tenor and mode outlined above a systematic analysis of the context of a text enables us to make predictions about language and vice versa. In other words, had Ryan and Elizabeth made different lexicogrammatical choices, and hence, different ideational, interpersonal and textual meanings, a different field, tenor mode configuration would emerge. Thus in relation to field, Ryan could have placed in agent position *chance* and *the Wall Street Crash* rather than *the Nazis*. This would have resulted in quite a different interpretation of historical events. Compare the following:

Original

i think they still would have had a chance because maby someone else could have used the luck of the wall streert crash to there advantage (historical figures determine historical events)

Reworked ideational meaning (consequences for field)

I think chance would have made their rise possible because the wall street crash provided a lucky oppportunity (chance and luck are responsible for historical events)

In relation to interpersonal meaning, by not using any modal resources, Ryan could have closed down the dialogic space for alternative perspectives. Compare the following:

Original

i think they still would have had a chance because maby someone else could have used the luck of the wall streert crash to there advantage (the use of modal resources presents the proposition as negotiable)

Reworked interpersonal meaning (consequences for tenor)

They still would have had a chance because someone else would have used the luck of the wall streert crash to there advantage (the absence of modal resources and the strengthening of *could* to *would* make the proposition less open to negotiation)

Finally, with regard to textual meaning, Ryan could have packaged his meanings differently by foregrounding the process of reasoning and by making the meanings more explicit. Compare

Original

i think they still would have had a chance because maby someone else could have used the luck of the wall streert crash to there advantage (reference word *they* refers to previous mention of Nazis, reasoning is less prominent realized in the conjunction *because*)

Reworked textual meaning (consequences for mode)

The reason why the Nazis would have had a chance relates to the fact that another leader could have used the luck of the wall streert crash to their advantage (the two

original clauses are combined into one, the conjunction because is re-expressed as the noun *reason* and is made prominent at the starting point of the sentence. The cohesive references are spelled out – *the Nazis, another leader*)

The three examples above demonstrate the two way relationship between aspects of context and language choice. Changing the language and meaning alters, for example, the extent to which the text feels written or spoken and the nature of the social relations between writer and reader. Where there are mismatches between language and actual context it is likely that a speaker or writer will be less effective. It is quite likely, for example, that the third example (in which textual meaning is reworked) might be more appropriate and effective in a formal written essay but less so in an informal forum. Regarding the first example, the original or reworked ideational meaning might be more, or less effective, depending on the school of history and whether it gives fate or human agency more weight in explaining past events. It is more difficult to say in what context the second example (in which interpersonal meaning is reworked) might be more effective. Whether being more categorical and less tentative is more persuasive or less so very much depends on where an utterance falls in the step by step (written or spoken) negotiation of ideas. However, it is likely that where social relations are close, categorical propositions are more likely and less so if participants are unsure of each others' alignments and positionings.

Variation in Semiotic Resources other than language

Very little of the existing literature concerning argumentation has focused on the role of semiotic modes other than language. This is despite the fact that, as discussed earlier, new technologies have changed the distribution of meaning making resources in both the process and products of argumentation. In this section I will therefore redress the balance by showing how semiotic resources can be deployed to make ideational, interpersonal and textual meanings (or, in Kress and Van Leeuwen's terms, representational, interactive and compositional meanings). I will also comment on some of the educational implications that emerge from an SF-MDA analysis.

Ideational/representational meaning (relating to field)

Within the context of electronic documents and computer conferencing visual images can now be relatively easily integrated. Within history, such images provide a means of supporting a claim. For example, in the history discussion forum, from which Text 2 is an extract, a set of propaganda posters and a set of photographs depicting Hitler making speeches at the Nuremberg Rallies were made available. Given the topic of debate it was expected that these resources would be exploited as documentary evidence. Following Kress and van Leuven (1996) the poster in Figure 2 places Hitler in a relationship with Christ through a symbolic suggestive process (the eagle hovering above Hitler symbolizes the dove over Christ and the shaft of light, the light from a Christian Heaven). An analysis of the poster shows how persuasive such posters were likely to be. Despite the fact that the propaganda posters would therefore provide firm evidence of the potential for Hitler to shape and influence public opinion, the visual images were not effectively exploited in the discussion forum. This may be because users were not yet adept at directly integrating and combining such resources. Certainly there was no explicit modelling or guidance by teachers as to how this could be done and the one attempt to encourage students to integrate the sources into the discussion was relatively unsuccessful. Here is Mr. Thomas (the teacher) encouraging the students to consider the role of photographs as documentary evidence.

Mr. Thomas [Hitler as a public speaker](#)

The Nazi party organised large public meetings ... There are some photographs of these meetings in Pictures, in a folder ... Does this help to explain why the Nazis became so popular by 1933?

Here is one student's response:

[Raeesha](#)

yes it dus coz if it had not of bin 4 hitler makin such gd speches den no1 wud of followed da Nazis

The extract shows that Raeesha uses the photo as evidence to support the claim that had Hitler not made good speeches then no one would have followed the Nazis. However, the visual structure in the photo does not provide evidence of Hitler's effectiveness at making speeches. Had Raeesha been trained in visual analysis, she could have more plausibly argued that the image provided evidence of Hitler's ability to attract large audience and/or the opportunities he had to influence large numbers of people (see Coffin 2006; Coffin and Derewianka 2008 for further discussion of multimodality in school history).



Figure 2 Nazi propaganda poster

Interpersonal/interactive meaning (relating to tenor)

Just as ideational meaning can be construed through non linguistic semiotic resources, so can interpersonal meaning. The interpersonal social dynamics of power relations and social roles can, for example, be played out through choices in font and colour. In Text 2, for instance, it seems likely that in response to Ryan's claim, Elizabeth's choice of distinctive font (Goudy stout), increased size (4 points bigger than Ryan's message) and colour (pink) has the effect of altering the power relations holding between them. This

seems particularly likely given that Ryan's follow up response is in an equally distinctive font colour (blue) and increased size (4 points bigger).

Ryan and Elizabeth's choices in colour can also be interpreted as indexes of gender relations. The case for this interpretation is strengthened when one takes into account the entire data set from which text 2 is an extract: of the 31% of messages using colour font, 45% were in pink and were all contributed by girls and 34% were in shades of blue and were all contributed by boys (apart from two messages in turquoise and one in royal blue).

In relation to colour and font choice in electronic conferences it is important for any discourse analysis to note patterns of usage in relation to particular students. For example, in the data from the ESRC project, it emerged that some of the students who were predicted to get a high grade and therefore perhaps not surprisingly, had the richest repertoires of argument moves were also more likely to use colour, font and/or case to differentiate their posts from those of other students. Rachael was one such student. Her messages were consistently striking:

hAnNaH U R rGhT IOI!!! ThEy wErE StRnGeR DaN OtHa pRtYs n
dA NAzIs cLd pROmIeS MrE WhIcH OtHa pRtYS CIDnT!! wHiCh iS
WhY ThE BeCmE So pWeR fUI!! 4 ExAmPIE tHeY SaId dAt tHeY
WID DeAl wId dA UnImPIOyMeNt If pPI VoTeD 4 dEm!!
~X~X~X~X~X~X~X~X~X~

(original message pink text against green background)

One can only speculate about the reasons for Rachel's choice of colour, font and case. However it is plausible that, whether intentional or not, by visually dominating phases of the discussion through her distinctive style she may have been claiming physical space (in much the same way that participants vie to claim the floor in face to face debates). In so doing she may have established a visual hierarchy of power relations.

SFL-MDA analysis of the Second Life discussion revealed a similar phenomenon. In this setting, however, it was the semiotic resource of space that played a role. Figure 3 has been annotated to show how, although a circular arrangement for the discussion made it difficult for a physical hierarchy of social relations to emerge, its insider/outsider boundaries nevertheless created different degrees of social distance/closeness. Figure 3 shows how Shunya a non student 'outsider' avatar who appeared at a certain point in the discussion remained firmly outside the circle with folded arms, even though he did make one or two contributions to the discussion.



Figure 3 Use of space in Second Life

Textual/compositional meaning (relating to mode)

We have already seen how colour and font serve to construe tenor relations. These resources can also be drawn on to package and organize messages. As mentioned earlier, the asynchronicity of discussion forums can cause disruptions in argument sequences and this can affect cohesion. Consistency in colour and headings in message headers can therefore contribute to cohesion by highlighting linkages between, for example, claims and supporting moves. Conversely, within messages, different colours can signal different moves. In the message below, the first part of the message is a claim move and is in maroon whereas the second part of the message is a social move and is in orange. The use of blue for the msn address gives textual prominence to this part of the message. As mentioned earlier, the power of the social elements in online argumentation should not be underestimated. It is very likely that the interpersonal dimension provided some of the momentum for the discussion by decreasing social distance and increasing students' engagement with each other and with each other's ideas.

hitler also got power because he joined the acting chancellor in a team and then hitler became chancellor making him powerful (original in maroon colour)

ps hey tahira hows ya new school luv rebecca (9ama)
my msn adi is ***@hotmail.com** (original in yellow colour with msn address in blue).

This section has shown how language and other semiotic resources communicate ideational, interpersonal and textual meanings. Whilst the illustrations have been by no means exhaustive, they have provided an indication of the range of semiotic resources available in contemporary pedagogic sites and have provided insight into the relationship between semiotic choice, context and communicative effectiveness.

Conclusion

This article has shown how in contemporary educational argumentation meanings made with language may be interwoven with meanings made in other modes (such as visual

images, space, colour and graphics) in an interdependent, dynamic process. I have argued that SF-MDA is particularly well suited to capture such a meaning making process, providing as illustration, sample analyses of naturalistic text extracts from a variety of argumentation contexts.

These analyses suggest that variation in argumentation structure and style can be partly (and systematically) explained by taking into account the relationship between context and choice of language/semiotic resources. Significantly, however, the analysis also shows that that choices (either by teachers or students) may not always be as effective as they could be. For example, in relation to Text 2 and 3, that students' choices appear to be reinforcing traditional gender divisions, unequal power relations and fights for the floor (aspects of social relations that are supposedly transformed by new technologies). Are we seeing, in other words, traditional social practices being dressed up in new technological skins?

To conclude, it would seem that in the context of students learning to engage in debate and produce written/multimodal texts, it is essential that teachers help them to develop their semiotic awareness and take a critical perspective on meaning, context and semiotic choice.

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