

## **Detecting ideological stance in an economics lecture: A multi-faceted approach**

Belinda Crawford Camiciottoli

### Abstract

The discipline of economics encompasses both theoretical concepts and empirical methods for the study of human behaviours, as well as competing schools of thought and ideologies that students need to engage with and reflect upon. The university economics lecturer has an important role in helping students accomplish this goal. However, as an individual, the lecturer also holds personal ideological positions that may emerge and elude L2 listeners. The aim of this paper is to propose a systematic and comprehensive procedure for detecting ideological stance in a university economics lecture. Using a case study approach, I apply Multimodal Critical Discourse Analysis to identify ideological stance and show how semiotic resources beyond verbal language contribute to its expression. This process was facilitated by the use of multimodal annotation software to analyse verbal expressions of ideological stance (e.g., evaluative language, rhetorical elements) and co-occurring non-verbal cues (e.g., prosodic features, gaze direction, gesturing). The method was able to shed light on how the lecturer's contemporaneous use of multiple semiotic modes worked synergistically in the expression of ideological meanings in relation to a controversial issue (i.e., access to healthcare in the United States) in subtle but distinctive ways that were linked to the lecturer's background and to the broader socio-political issues of the research context. The method could be leveraged to inform ESP settings to assist L2 learners in

acquiring a better understanding of lecturers' stance towards content, thus resulting in a more complete, effective, and satisfying lecture experience.

Keywords: economics, lectures, ideological stance, multimodal critical discourse analysis, ESP

## 1. Introduction

The university economics lecture brings together a unique blend of discursive features, epistemological approaches, and instructional aims. From a disciplinary perspective, although there is no universally agreed upon definition of economics, it is broadly construed as a social science that studies human behaviours and choices in relation to the scarcity of resources (Backhouse & Medema, 2009). However, to do so, it not only makes use of empirical methods based on models and equations to explain economic theories, but also draws from competing schools of thought to engage in scholarly debates.<sup>1</sup> Thus, as a discipline, economics falls somewhere in the middle of the hard/soft cline of knowledge (Hyland, 2000), indicating a somewhat fuzzy status. This eclectic nature is similarly reflected in the disciplinary discourse of economics. A case in point is Thompson's (2006: 263) corpus-informed study of the language of economics lectures which identified a heterogeneous range of keywords encompassing specialized vocabulary (e.g., *elasticity*, *supply*, *profit*), mathematical symbols (e.g., *lamda*, *delta*), and value-oriented lexical items

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<sup>1</sup> For example, two major schools of thought are reflected in classical or laissez-faire economic theory which advocates for free market capitalism and opposes any government intervention versus Keynesian economics that supports government actions related to fiscal and monetary policy used to manage the economy.

(e.g., *liberalization, choice, constraint*).

A distinctive epistemological feature of economics discourse relates to the construction of knowledge through the juxtaposition of real and hypothetical worlds, where theories are tested in models with controlled variables and then applied to attempt to predict events and phenomena in the real world (Tadros, 1994; Motta-Roth, 1995; Bondi, 1999). For example, economics lectures are often characterized by hypothesis-inducing imperative forms such as *consider, imagine, and suppose*, as well as *if-then* patterns (Crawford Camiciottoli, 2007). Argumentation is another important aspect in the construction of knowledge in the discourse of economics (Bondi, 1999), stemming from its tradition of opposing schools of thought. Indeed, such conflicting positions have even emerged in how disciplinary experts interpret the role of language in the dissemination of knowledge in the field of economics (Samuels 1990; Backhouse, Dudley-Evans, & Henderson, 1993). On the one hand is the traditional positivist approach that favours the instruments and language of the scientific method. On the other hand is the rhetorical approach that emphasizes human reasoning and the use of linguistic devices such as metaphor, analogy, and appeals to authority to persuade interlocutors (McCloskey, 1985; Klamer, 1990).

From a pedagogical perspective, the aim of economics is not only to provide learners with relevant theoretical foundations, but also to introduce them to how knowledge is constructed in the field of economics, for example, through the language of model building (Henderson & Hewings, 1990). Moreover, understanding the argumentative nature of economics discourse also becomes an important strategy to familiarize learners with the

discursive practices of the community, while encouraging them to critically assess the issues that they encounter.

From the above discussion, it is evident that economics as an academic discipline involves contrasting viewpoints and approaches that learners will need to identify and reflect upon. During an economics lecture, the lecturer clearly plays a key role in guiding students towards this objective. However, beyond their disciplinary expertise, we should remember that university lecturers are also individuals who hold their own views and ideological positions, which may lead to challenging situations in the classroom.

As case in point is seen in the United States where there is an ongoing controversy relating to the expression of political ideology by university professors. More specifically, universities have come under criticism from right-wing political actors and media as espousing and promoting left-wing ideals and values at the expense of conservative ones. For example, American universities have been portrayed as sources of liberal bias, or as “advocacy programs designed to indoctrinate students with one-sided views of controversial issues” (Horowitz, 2007: 64). However, there is no empirical evidence that the political leanings of university professors actually have any influence on their students’ political orientations (Mariani & Hewitt, 2008; Woessner & Kelly-Woessner, 2009). Yet this issue continues to arise and be reported in the press from time to time. In a recent incident, a Georgetown University professor was criticized for strongly disparaging a well-known conservative politician on Twitter. A university spokesperson responded to critics by stating the following: “While faculty members may exercise freedom of speech, we

expect that their classrooms and interaction with students be free of bias and geared toward thoughtful, respectful dialogue” (DeSoto, 2018). This comment serves to highlight the careful balancing act in which university professors must engage, namely, maintaining the right to hold their own ideological beliefs, but refraining from imposing them on students.

The particular economics lecture under examination in this case study deals with aspects of healthcare in the United States and is thus embedded in a wider but related political debate. Unlike most other advanced countries, in the United States there is no constitutional or legal basis for widespread provision of healthcare to the whole population, even if public opinion broadly supports the idea (Bodenheimer, 2005). This derives from an ingrained ideological split between progressives who believe there should be universal coverage through a government-run system and conservatives who believe healthcare should be the responsibility of private individuals. The limited forms of governmental assistance that have been established over the years, specifically Medicare for the elderly, Medicaid for the poor and, more recently, the Affordable Care Act (also known as Obamacare) frequently come under attack and are constantly undermined by conservative forces, resulting in ongoing public debates. Thus, any discussion involving healthcare in the United States in a university classroom is inevitably interconnected with this ideologically-charged reality.

During lectures with topics that entail diverse ideological stances, the lecturer’s expression of personal attitudes and positions becomes a component of the whole lecture experience, beyond the mere transmission of conceptual or factual knowledge. Indeed, students often have a desire to know the expert point of view (Northcott, 2001), which they can then take

into account when forming their own stance on a particular social phenomenon. However, an issue that arises especially in the context of L2 listening comprehension is that, during lectures, learners may have difficulty engaging in both “discriminative listening (distinguishing between fact and opinion)” and “critical listening (evaluating the message)” (Flowerdew & Miller, 2010: 159). Therefore, the ability to detect a lecturer’s stance toward content is an important skill to be addressed in ESP settings.

Towards this goal, I propose a systematic procedure for identifying ideological stance on multiple levels of communication: linguistic, paralinguistic, and extra-linguistic. The procedure will be illustrated by means of an exploratory case study to show how ideological positions on the controversial topic of access to healthcare in the United States emerge both verbally and non-verbally in an economics lecture delivered at the Massachusetts Institute of Technology (MIT). The underlying pedagogical rationale is the need to consider lecture comprehension from a multimodal perspective (Crawford Camiciottoli & Querol-Julián, 2016). In fact, listeners process lecture content both aurally (verbal input, prosodic features of the lecturer’s speech) and visually (visual input and the lecturer’s non-verbal signals), all of which may come into play in the expression of ideological stance. A better understanding of how lecturers express stance as related to lecture content can be fruitfully applied when teaching ESP learners in order to broaden and enhance their lecture comprehension skills.

## **2. Methodology**

Following Lincoln and Guba's (1990) recommendations for the case study methodology, in this section I provide a thick description (Geertz, 1973) of the research setting, including the lecture, the lecturer, and the analytical approach.

## 2.1. The lecture

The lecture used for this case study was drawn from a larger corpus of various genres of video-recorded materials compiled for multimodal analysis and for successive leveraging in ESP instructional settings.<sup>2</sup> It consists of a lecture video file and the corresponding transcript that are publicly available on the MIT OpenCourseWare platform.<sup>3</sup> The lecture is entitled "Introduction to Microeconomics" and is the first of 24 lectures in the undergraduate course "Principles of Microeconomics". It has a traditional frontal format and is mostly monologic, but with some interaction with the students in the audience. The lecturer speaks with a largely informal conversational style and occasionally writes on chalkboard. He is positioned at the front of what appears to be a relatively large lecture hall. The content of this introductory lecture includes an overview of some fundamental themes of microeconomics that will be further studied throughout the course: the price mechanism, models, utility/profit maximization, constrained optimization, and positive vs. normative

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<sup>2</sup> The corpus was collected within an interuniversity research project financed by the Italian Ministry for the University (PRIN 2015 no.2015TJ8ZAS).

<sup>3</sup> <https://ocw-origin.odl.mit.edu/courses/economics/14-01sc-principles-of-microeconomics-fall-2011/index.htm>

analysis.

## 2.2. The lecturer

The academic who delivered this lecture is Professor Jonathan Gruber. He is well known in the United States outside of his prestigious role at MIT as Ford Professor of Economics. In fact, he has held leadership positions in U.S. health care entities including the Director of the Health Care Program at the National Bureau of Economic Research and President of the American Society of Health Economists. Of particular interest to this study is that fact that he was a key consultant to the Obama administration for the Affordable Care Act that was passed in 2010 and became operational in 2014, providing healthcare insurance to millions of Americans who previously had no coverage. He is a public figure who continues to be an influential voice in U.S. health policy through articles published in the national press and appearances on television news shows.

Professor Gruber also posts his opinion pieces published in leading U.S. newspapers on his MIT institutional webpage which, from their titles alone, clearly show his recognized expertise and strong advocacy for the progressive view in relation to the need for widespread provision of healthcare in the United States.<sup>4</sup> Indeed, this evident ideological stance contributed to the rationale for selecting of this particular OpenCourseWare lecture among others that are included in the corpus mentioned above. The timely issue of

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<sup>4</sup> <https://economics.mit.edu/faculty/gruberj/opinion>



healthcare access in the United States as addressed in this lecture by a leading proponent of the progressive viewpoint would seem to offer opportunities for the expression of ideological stance. Moreover, as a pioneer of the OpenCourseWare movement, MIT aims to freely offer high quality educational experiences to anyone who wishes to learn (Lerman & Miyagawa, 2002), meaning that this OpenCourseWare lecture is available to a vast international audience. MIT further characterizes the lecturers who participate in the OpenCourseWare initiative as educators who “believe their purpose is to create and impart knowledge not only to MIT students but to society at large” (D’Oliveira & Lazarus 2016: 13). Thus, the potential for high visibility among learners worldwide together with the presence of a high-profile lecturer steered my selection of this lecture.

### 2.3. The analytical approach

In order to explore how ideological stance in relation to healthcare access in the United States emerges both verbally and non-verbally in this economics lecture, I apply Multimodal Critical Discourse Analysis (hereafter MCDA), as a relatively new area of study that responds to van Leeuwen’s (2013: 5) observation that CDA needs to go beyond the linguistic level of investigation because “discourses that need the scrutiny of the critical eye are now overwhelmingly multimodal”. According to Machin (2013), MCDA builds on traditional CDA by showing how semiotic resources beyond verbal language contribute to communicating ideologies and shaping social practices. He advocates for “being critical at the multimodal level” (Machin, 2013), by seeking to understand how multiple semiotic resources can be harnessed to communicate and promote values, ideologies, and identities.

In this analysis, I also focus on intersemiotic complementarity (Royce, 2007), or how multiple semiotic modes complement each other to express complex meanings, represented in this case not only by the theoretical aspects of economics as an academic discipline, but also by the underlying socio-political dynamics of the institutional culture discussed in the Introduction.

The expression of ideological stance was investigated at two levels. At the macro level, I considered the topic of the lecture extract selected for analysis. According to van Dijk (2001), the choice of a particular topic on the part of speakers and writers allows them to exert control over the communication and shape the discursive frame. At the micro level, I focused on the lexico-grammatical and rhetorical features of the speech of the lecturer used to stake out positions/roles and provoke reflection among listeners, including evaluative expressions, intensifiers, modality, cohesion, pronouns, informality, and sentence mode (Fairclough, 1989; Simon-Vandenberg, 1997). Also at the micro level, I examined non-verbal features that can be used by speakers to signal intentions, attitudes, and perspectives in order to position themselves and others vis-à-vis a proposition, including prosodic stress (Simon-Vandenberg, 1997; van Dijk, 2001), hand gestures (Rogers & Mosley, 2008), gaze direction (Machin & Meyer, 2012), and body orientation (Norris, 2004). With particular reference to the latter two, direction of gaze can encourage certain kinds of interpretations, such as more or less importance attributed to a particular message (Machin & Meyer, 2012), while body position toward or away from interlocutors can signal speakers' engagement vs. disengagement with them, respectively (Norris, 2004).

In terms of analytical procedure, I first viewed the whole lecture to select an extract with content that reflected the potential for expressing ideological stance. Then, working from the transcript of the selected extract (see the Appendix), I identified linguistic expressions of ideological stance as outlined above. Following this analysis, I watched the video clip of the selected episode to determine what kind of non-verbal cues co-occurred with the previously identified linguistic expressions.<sup>5</sup> Once I had distinguished both verbal and non-verbal features of particular interest, I utilized ELAN multimodal annotation software (Wittenburg, Brugman, Russel, Klassmann, & Sloetjes, 2006) to analyse and display particularly rich *multimodal ensembles* (Kress, 2011)<sup>6</sup> that appeared to work in a synergistic way to convey an ideological position.

Table 1 illustrates the framework set up in ELAN for the annotation of multimodal ensembles in the lecture. This software allows users to create ad-hoc annotations in multiple levels (i.e., tiers) according to particular features of interest than are then displayed and managed under streaming audio-visual media. In the far left column are the overarching analytical tiers established for the analysis: linguistic stance, prosody, gaze, gesture description (based on Kendon, 2004), gesture function (based on Kendon, 2004; Weinberg,

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<sup>5</sup> Body-related cues selected for analysis were limited to those that could be clearly and consistently observed from the video recording. These included hand/arm gestures, body orientation, and gaze direction, which are among the semiotic modes considered relevant in learning contexts (Ochoa, 2017). In contrast, because there were no close-up shots of the lecturer, other smaller scale modes (e.g., facial expressions, head nods) could not be systematically observed and were therefore not included.

<sup>6</sup> According to Kress (2011: 38), all semiotic modes contribute to meaning in a multimodal ensemble in that “language is always a partial bearer of the meaning of a textual/semiotic whole”.

Fukawa-Connelly, & Wiesner, 2013), and body orientation as 1) toward/away from audience and 2) open (arms free)/closed (arms crossed) posture (Norris, 2004; Harrigan, 2008). Then, I formulated what ELAN calls *controlled vocabulary*, which are the various sub-categories created by the user within the ad-hoc tiers that can be annotated in correspondence to the streaming media. The middle column shows the actual annotations inserted into the software, while the right column provides their descriptions. Finally, I sought to interpret the multimodal ensembles encoding the lecturer’s stance in relation to the broader contextual factors discussed previously.

<b>Analytical tiers</b>	<b>Controlled Vocabulary</b>	
	<b>Annotation</b>	<b>Description</b>
Linguistic stance	<ul style="list-style-type: none"> <li>• Inten</li> <li>• Eval</li> <li>• Inform</li> <li>• Mod</li> <li>• Coh</li> </ul>	<ul style="list-style-type: none"> <li>• Intensifying expression</li> <li>• Evaluative expression</li> <li>• Informal register</li> <li>• Modality</li> <li>• Cohesion</li> </ul>
Prosody	<ul style="list-style-type: none"> <li>• Stress</li> <li>• Pause</li> </ul>	<ul style="list-style-type: none"> <li>• Paralinguistic stress</li> <li>• Slight pause between words</li> </ul>
Gaze	<ul style="list-style-type: none"> <li>• Toward</li> <li>• Away</li> </ul>	<ul style="list-style-type: none"> <li>• Directed toward audience</li> <li>• Directed away from the audience</li> </ul>
Gesture_description	<ul style="list-style-type: none"> <li>• FgExPTS</li> <li>• FgExPTA</li> <li>• PalminUD</li> <li>• ShSg</li> </ul>	<ul style="list-style-type: none"> <li>• Fingers extended prone toward self</li> <li>• Fingers extended prone away from self</li> <li>• Palm inward moving up and down</li> <li>• Shoulder shrug</li> </ul>
Gesture_function	<ul style="list-style-type: none"> <li>• Social</li> <li>• Index</li> <li>• Modal</li> </ul>	<ul style="list-style-type: none"> <li>• Emphasize message</li> <li>• Indexical to indicate a referent</li> <li>• Express certainty/uncertainty</li> </ul>
Body orientation	<ul style="list-style-type: none"> <li>• Clos away</li> <li>• Clos tow</li> <li>• Open tow</li> </ul>	<ul style="list-style-type: none"> <li>• Closed facing away from audience</li> <li>• Closed facing toward audience</li> <li>• Open facing toward audience</li> </ul>

**Table 1. Multimodal Analytical Framework for ELAN**

### 3. Results and discussion

#### 3.1 Topic choice

In the portion of the lecture selected for the investigation, Professor Gruber is explaining the difference between positive and normative economics, which he describes as the “distinction between the way things are, which is positive economics, and the way things should be which is normative economics”.<sup>7</sup> The specific extract on which the analysis will focus occurs at the time interval 20:06-22:09 in the 34-minute lecture. To explain the normative side of economics, the lecturer uses real-world exemplification, in line with an instructional approach that is commonly found in economics lectures (Flowerdew & Miller, 1995, Bondi, 1999, Crawford Camiciottoli, 2007). However, the example he provides is quite unique and rather controversial: the case of a human kidney that was auctioned on eBay, reaching a price of 5.7 million dollars before Ebay shut it down.<sup>8</sup> With this example, he illustrates the normative question of whether access to healthcare should be dependent on individual wealth. Interestingly, the lecturer could have chosen among many other more common (and less controversial) examples of normative questions similar to those often

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<sup>7</sup> All textual extracts and images from the portion of the lecture utilized for this case study are reproduced under Creative Commons BY-NC-SA license with the following attribution: Jonathan Gruber. 14.01SC Principles of Microeconomics. Fall 2011. Massachusetts Institute of Technology: MIT OpenCourseWare, <https://ocw.mit.edu>. License: Creative Commons BY-NC-SA. <https://creativecommons.org/licenses/by-nc-sa/4.0/legalcode>

<sup>8</sup> <https://nypost.com/1999/09/03/ebay-pulls-the-plug-on-5-7m-human-kidney/>

found in economics textbooks. Among these are, for instance, whether harmful substances should be taxed at higher levels (Lipsey & Harbury, 1992), or whether the government should be more concerned with unemployment than inflation (Atkinson & Johns, 2001). Another example of a normative question found in an economics lecture included in a corpus collected by Crawford Camiciottoli (2007) is whether companies should use slave labour, whose answer is obviously uncontentious. In contrast, Professor Gruber's example addresses the timely and thorny issue of healthcare inequality in the United States that is driven primarily by income inequality. From the Methodology section, we know that access to healthcare is of great concern to the lecturer as a strong advocate of the recently passed Affordable Care Act to which he contributed significantly. This legislation, in fact, aims to help alleviate the problem of unequal access. Therefore, through his unusual topic choice with close connections to an area in which he is personally invested, the lecturer effectively steers and shapes the discursive frame (van Dijk, 2001) and, in doing so, guides the students to engage in a deeper reflection on this important aspect of the American socio-political scene.

### 3.2. Multimodal ensembles

In this sub-section, I present the analyses of a series of screenshots reproduced from ELAN that illustrate multimodal ensembles involved in the expression of ideological stance in the extract selected for analysis. For reasons of space, these will be limited to some particularly noteworthy episodes.

In Figure 1 and in all successive figures, the screenshot provides the visual representation of previously outlined set-up in ELAN (see Table 1) for the multimodal analysis of the selected utterance. Below the image (which is streaming video when using the software) is the soundwave of the audio input, under which is the series of ad-hoc tiers described in the Methodology section, in addition to the initial “Transcript” tier where the verbal input corresponding to the soundwave is inserted. To the right of the tiers and in correspondence with the relevant segments of the soundwave are the detailed annotations subsumed within each tier. The screenshot in Figure 1 refers to the utterance “Sadly, not many people are willing to be organ donors” (line 6 in the Appendix). Here the lecturer is explaining the concept of positive economics as exemplified by the price of a kidney depending on the mechanism of supply and demand. However, in the middle of this explanation, he briefly digresses to convey a personal position related to the lack of organ donors. The multimodal ensemble includes linguistic evaluation (“sadly”) with stress on word “willing” indicated by the extended height and width of the corresponding part of the soundwave. The phrase “to be organ donors” is the first part of a cohesive element. However, his gaze and body orientation are disengaged from the audience. Although he conveys his critical attitude verbally and prosodically, his non-verbal cues seem to downplay the verbal message. This could be construed as a desire to express his viewpoint, but in an understated way that does not detract from main concept being explained.

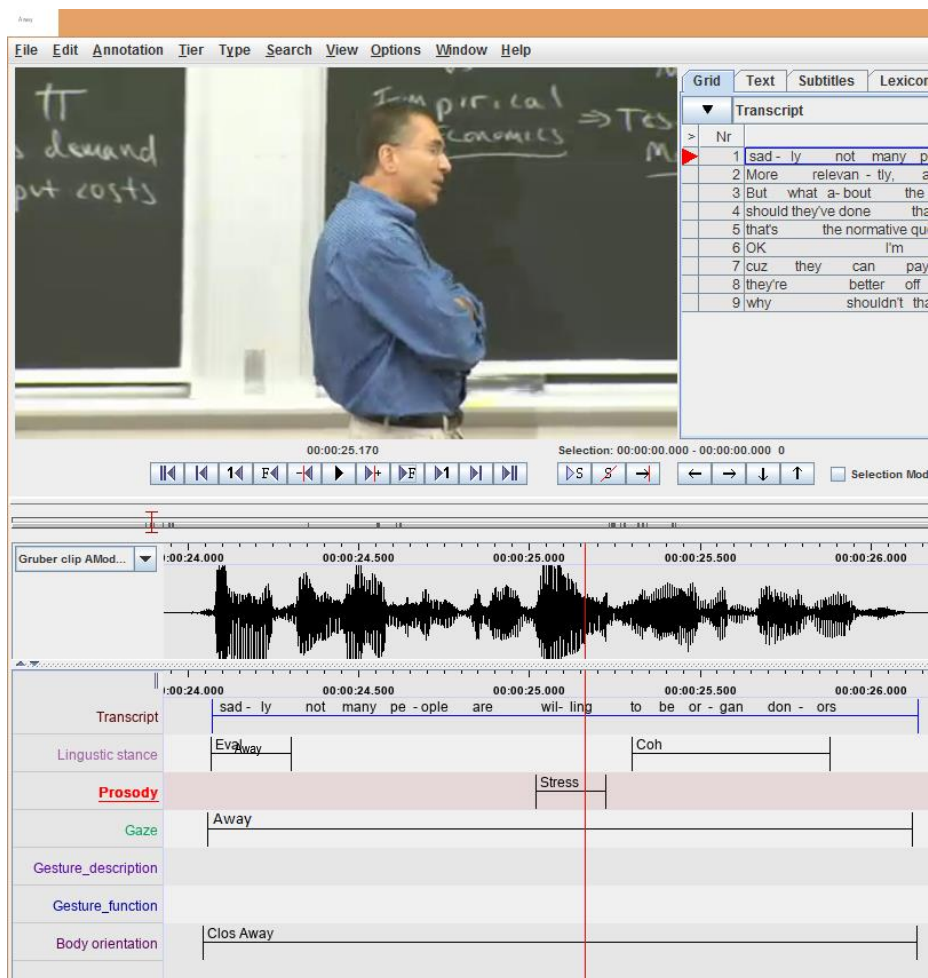


Figure 1. “Sadly, not many people are willing to be organ donors”

In Figure 2, the lecturer continues in his digression with “More relevantly, a lot of people aren't in good situations to be organ donors” (lines 6-7), where the multimodal ensemble includes evaluation (“more relevantly”, “aren't in good situations”, with both containing prosodic stress) and cohesion by the repetition of “to be organ donors”, as a parallel structure that tends to amplify the rhetorical effect (Simon-Vandenberg, 1997). However, he now he gazes and turns toward the audience, which seems to strengthen his critical assessment of the difficult situation in relation to organ donation in the United States.



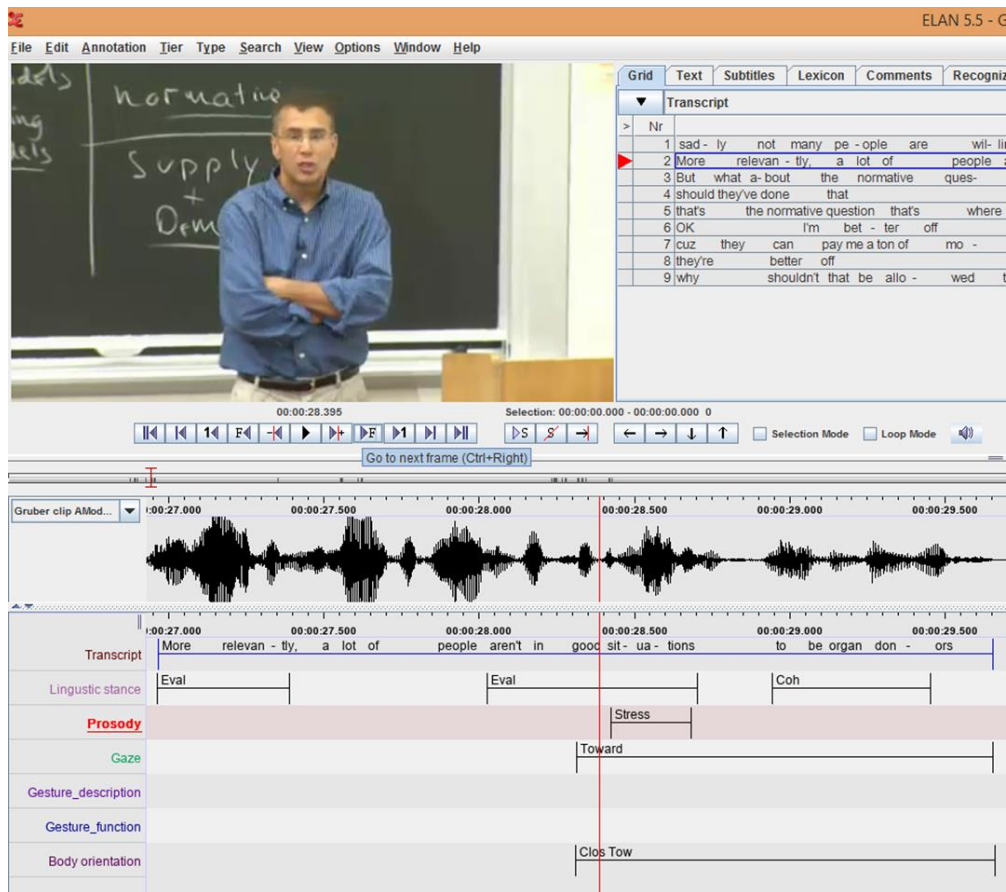


Figure 2. “More relevantly, a lot of people aren't in good situations to be organ donors”

In Figure 3, to explain the normative side of the issue, the lecturer addresses the question of whether eBay should have allowed the sale of a kidney and then made the decision to shut it down. In the question “should they have done that” (lines 13-14), the multimodal ensemble includes the deontic modal verb *should* and prosodic stress on “done”. His gaze and body orientation are disengaged and he performs a modal gesture, specifically a shoulder shrug which is widely associated with uncertainty in Western culture (Jokinen & Allwood, 2010). In this way, he refrains from passing judgment and seems to leave the door open to an alternative point of view.

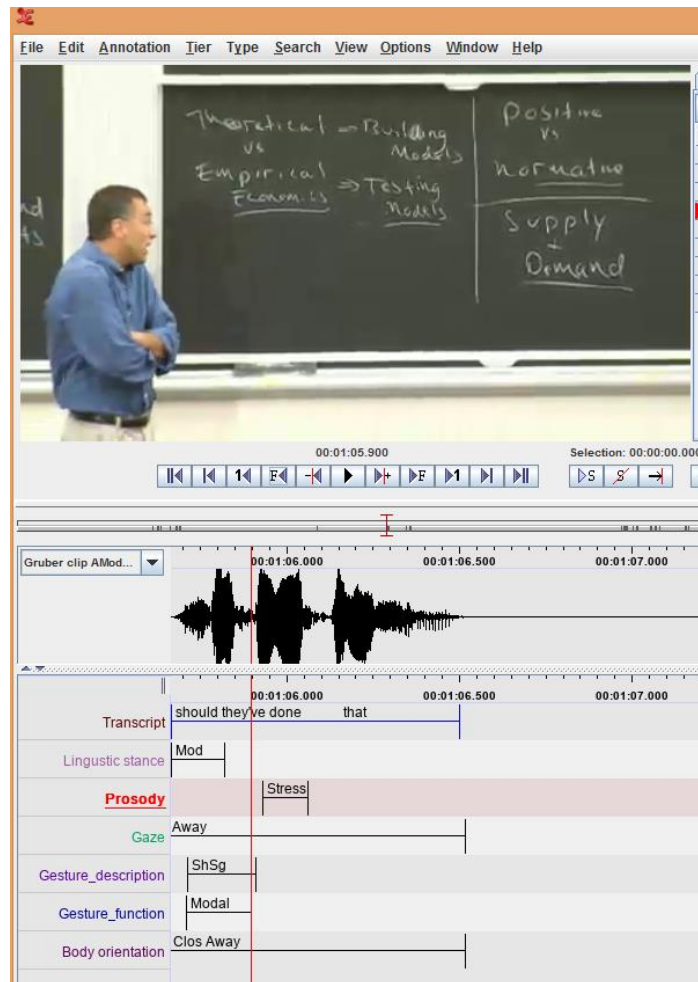


Figure 3. “Should they’ve done that”

In Figure 4, the multimodal ensemble for “That’s the normative question. That’s where economics gets really interesting” (line 14) includes evaluation (“interesting”), intensification (“really”, with prosodic stress) and gaze and body orientation toward audience. Through this multimodal ensemble, the lecturer communicates his own enthusiasm for the discipline as a whole. It has been suggested that such interpersonal devices used to reveal attitudes and feeling towards the discipline or particular aspects of lecture content can contribute to enhancing rapport with the audience in order to stimulate

interest and create a more learning-friendly atmosphere (Northcott, 2001; Crawford Camiciottoli, 2007).

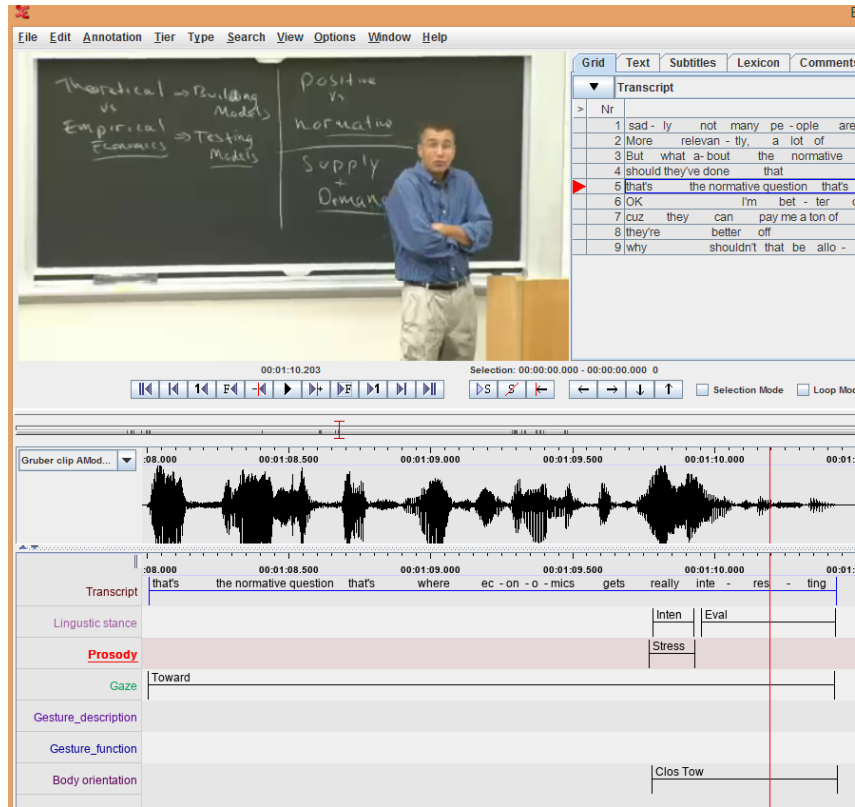
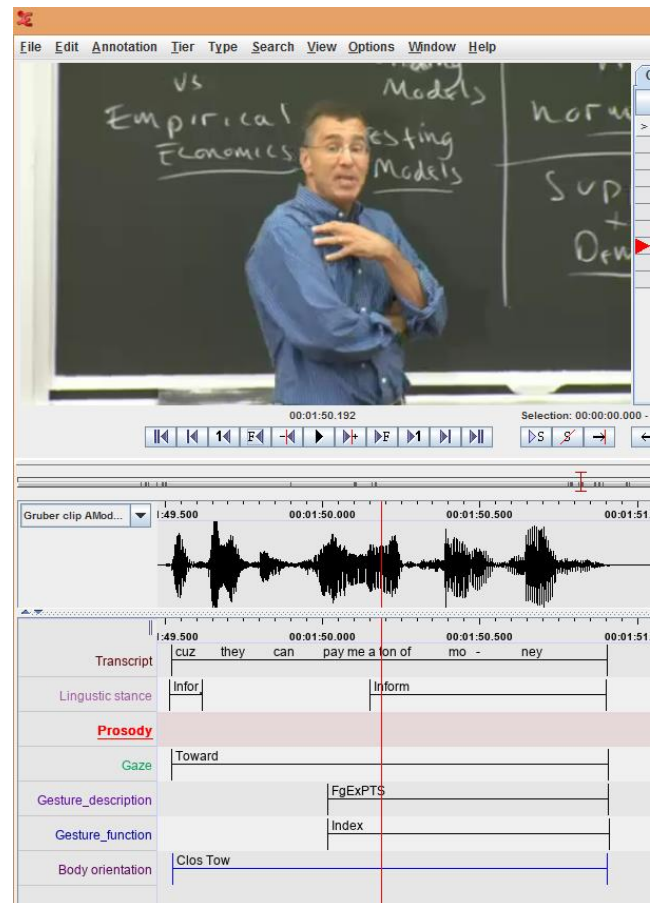
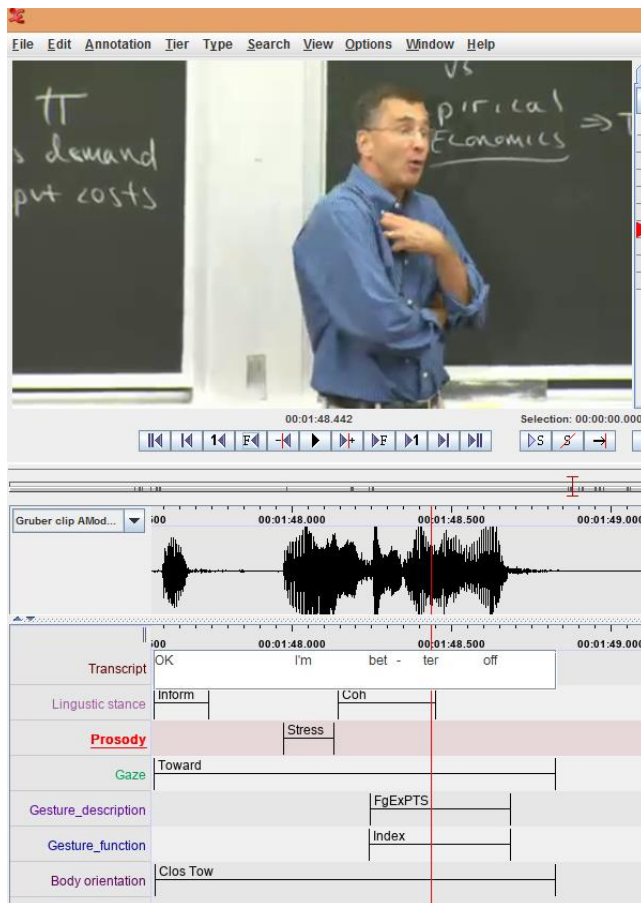


Figure 4. That's the normative question. That's where economics gets really interesting”

Figures 5a, 5b, 6, and 7 refer to the lecturer’s explanation of the potential benefits of selling kidneys for both donors and recipients. Figure 5a (left) illustrates the multimodal ensemble for “OK I’m better off” (line 20) that includes prosodic stress on “I’m”, reinforced with gaze and body orientation toward the audience and an indexical gesture with fingers extended prone toward himself to emphasize the potential benefit for the donor while assuming that role. In Figure 5b (right), he provides the rationale for the previous utterance (“cuz they can pay me a ton of money” - lines 20-21), namely, the donor’s financial

motivation. The multimodal ensemble includes informality (“cuz”, “a ton of money”), again reinforced with gaze and body orientation toward the audience and the same indexical gesture toward himself.



Figures 5a and 5b: “OK, I’m better off

**cuz they can pay me a ton of money”**

In Figure 6, the multimodal ensemble for “they’re better off” (line 21) is similarly performed with prosodic stress on “they’re” and cohesion by repeating the phrase “better off” from the previous utterance. The utterance is reinforced with gaze and body orientation

toward the audience, but this time the lecturer uses an indexical gesture with fingers extended prone and away from himself to distinguish the recipient who also benefits.

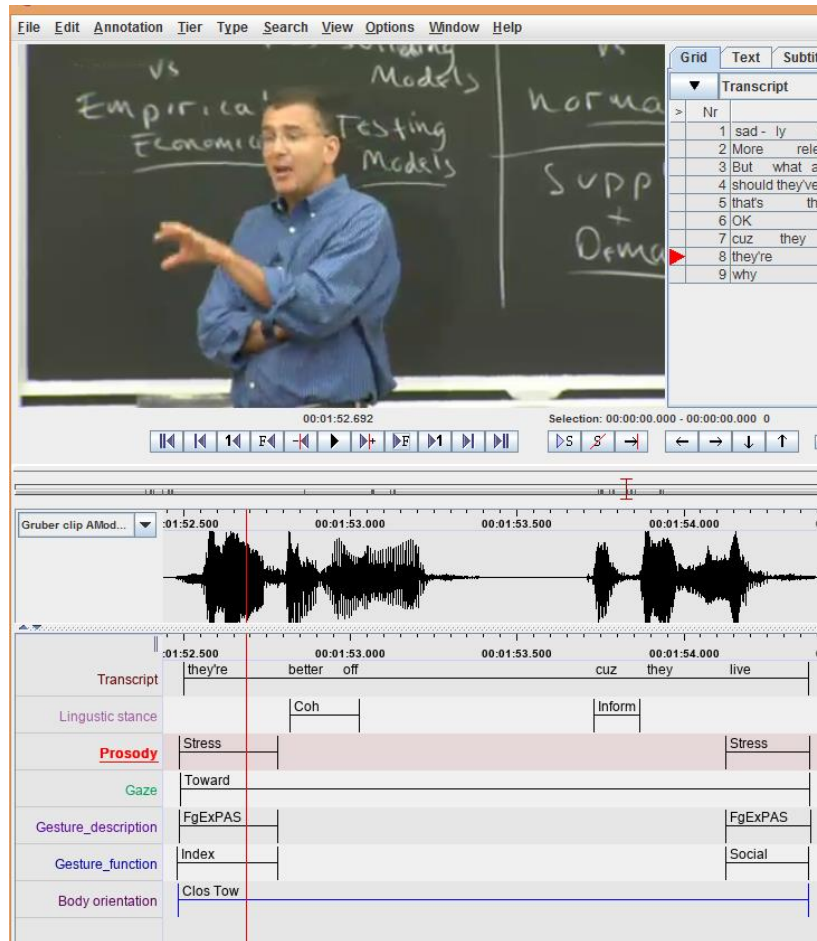


Figure 6. “They’re better off”

In Figure 7, the multimodal ensemble for the utterance “cuz they live” (line 21) includes informality (“cuz”), prosodic stress on “live”, reinforced with gaze and body orientation toward the audience. In this case, the lecturer performs the same gesture with fingers extended prone away from himself, but it functions as social gesture to emphasize the word “live”. In Figures 5a, 5b, 6, and 7, the combination of the multimodal ensembles

strengthens the rhetorical effect of the lecturer’s hypothetical scenario, which seems to invite a critical reflection on the part of the audience.

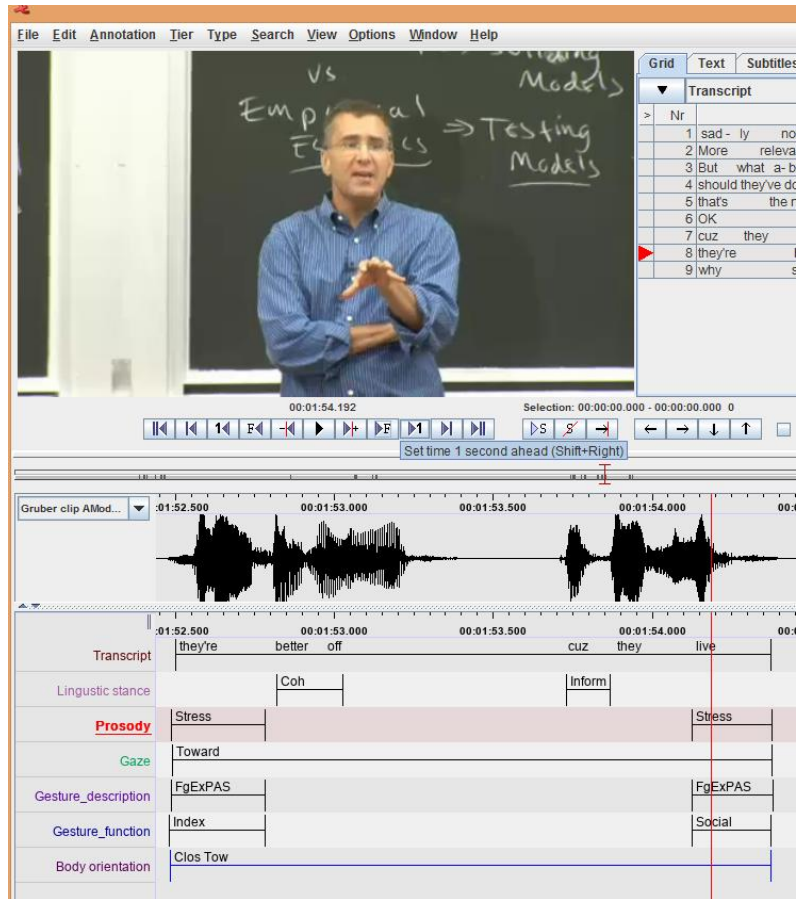


Figure 7. “cuz they live”

In the final Figure 8, building on his previous utterance, the lecturer indeed challenges the audience to reflect on the buying and selling of kidneys. In the multimodal ensemble for the question “why shouldn’t that be allowed to happen” (line 22), we see prosodic stress on the interrogative pronoun “why”, together with negative modal expression “shouldn’t”. Gaze and body orientation are toward the audience, but this time the lecturer assumes an open posture, as opposed to the closed posture with arms crossed in front of the body which he



often displays. He also performs an attention-focusing social gesture with palm inward moving up and down. These multiple semiotic resources all seem to work together to convey a sort of “devil’s advocate” attitude, which he then follows by directly inviting the audience to propose a counterargument (“so you tell me” – line 23). In the ensuing interaction with students, he then guides them toward the notion of social inequality, where the wealthy would have an unfair advantage over the poor.

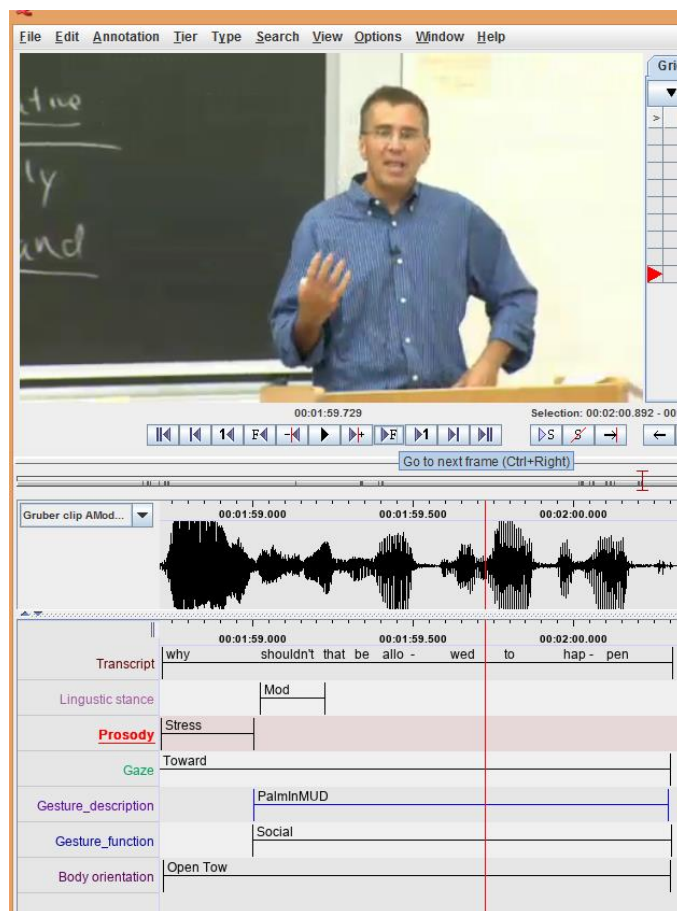


Figure 8. “Why shouldn’t that be allowed to happen?”

## 5. Conclusions

In this exploratory case study, I have proposed a systematic procedure for detecting ideological stance in the context of a university lecture that integrates MCDA (Machin & Mayer, 2012; Machin, 2013) with software-assisted multimodal annotation. The MCDA framework implemented to analyse both the verbal and non-verbal expression of the lecturer's attitudes and positions enabled me to flesh out indications of ideological stance in order to interpret them within the local (institutional) and wider (socio-political) contexts of usage. This multi-faceted analysis was then brought into greater focus by the use of multimodal annotation software that served to highlight the intersemiotic complementarity (Royce, 2007) within the emerging multimodal ensembles (Kress, 2011). In some cases, the analysis also identified what Lemke (2005: 85) refers to as the "multiplying" meaning where a combination of semiotic resources can multiply the range of potential meanings that can be interpreted. For example, during a digressive episode, a personal viewpoint that was expressed strongly on the verbal and prosodic levels was also mitigated by detached gaze, closed posture, and non-facing body orientation. In other cases, the complementarity of semiotic resources appeared to enable the lecturer to avoid overt expressions of ideological stance, while guiding the students toward their own discovery and encouraging thoughtful reflection and dialogue at the same time. In this way, students are effectively introduced not only to important theoretical concepts of economics, but also to how knowledge is constructed and debated within the discipline, as discussed in the Introduction.

The analysis of ideological stance also revealed choices on the part of the lecturer that could be linked to his distinguished background in the area of U.S. healthcare policy. At the



macro level, the topic (i.e., the sale of kidney to exemplify normative economics) diverged considerably from the less controversial topics used in conventional economics teaching materials and was clearly aligned with the lecturer's ideological stance. At the micro level, the multimodal ensembles seemed to encode nuanced meanings that allowed students to see glimpses of his own views, but without imposing them. This is broadly in line with the current approach to this issue in mainstream higher education, as also discussed in the Introduction.

As a case study, the above interpretations are necessarily restricted to this particular economics lecture. Yet, as Scherer & Ekman (2008) note, because the minute analysis of detailed non-verbal features is extremely time-consuming, it is not feasible for large-scale studies with multiple participants. In fact, studies of non-verbal behaviours are often based on individual cases which, although not generalizable to other populations, can nonetheless provide valuable insights by alerting researchers to potentially salient aspects of the general phenomenon under study.

The findings of case studies can also be used to inform particular contexts of usage. In this case study, the way this lecturer approached the expression of ideological stance in the university classroom can provide insights into how academics might deal with controversial issues in a sensitive way in light of the complex political and social realities that impact today's higher education settings. In addition, the systematic and multi-faceted procedure proposed for the detection of ideological stance through lexico-grammatical, rhetorical, and non-verbal cues has important pedagogical applications in that it can be leveraged to foster

and enhance critical listening skills. More specifically, ESP practitioners can use the method to analyse stance in video-recorded materials for use with L2 learners as a way to prepare for challenging content lectures designed to engage them in ideological reflection. Finally, to acquire a better understanding of the multimodal expression of ideological stance in lecture discourse, it would be worthwhile to conduct additional case studies involving other disciplines. This could shed light on which disciplines may have more potential for the expression of ideological stance and therefore may need particular attention in ESP lecture comprehension activities. Further insights could also be achieved by expanding the current case study to include additional economics lectures in an effort to determine whether the expression of stance depends more on individual propensity or on the discipline itself.

## 6. References

- Atkinson, B. & Johns, S. (2001). *Studying Economics*. Basingstoke: Macmillan International Higher Education
- Backhouse, R. E. & Medema, S. G. (2009). "Retrospectives: On the definition of economics". *Journal of Economic Perspectives* 23: 221-233.
- Backhouse, R.E., Dudley-Evans, T. & Henderson, W. (1993). "Exploring the language and rhetoric of economics." In W. Henderson, T. Dudley-Evans & R. Backhouse (eds.) *Economics and Language*. 1-21. London: Routledge.
- Bodenheimer, T. (2005). "The political divide in health care: A liberal perspective". *Health Affairs* 24: 1426-1435.

- Bondi, M. (1999). *English Across Genres: Language Variation in the Discourse of Economics*. Modena: Il Fiorino.
- Crawford Camiciottoli, B. (2007). *The Language of Business Studies Lectures*. Amsterdam: John Benjamins.
- Crawford Camiciottoli, B. & Bonsignori V. (2015). “The Pisa Audio-visual Corpus Project: A multimodal approach to ESP research and teaching”. *ESP Today* 3: 139-159.
- Crawford Camiciottoli, B. & Querol-Julián, M. (2016). “Chapter 24. Lectures”. In K. Hyland & P. Shaw (eds.) *The Routledge Handbook of English for Academic Purposes*, 309-322. London: Routledge.
- D’Oliveira, C. & Lazarus J. S. (2016). “MIT OpenCourseWare. A leader in open education”. *The Bridge* 46: 12-23.
- DeSoto, R. (2018, October 2). “Georgetown U backs prof. calling for GOP senators to be castrated, fed to pigs, for Kavanaugh support”. *The Western Journal*. Retrieved from <https://www.westernjournal.com/georgetown-u-backs-prof-calling-gop-senators-castrated-fed-pigs-kavanaugh-support/>
- Fairclough, N. (1989). *Language and Power*. London: Longman
- Flowerdew, J. & Miller, L. (1995). “On the notion of culture in L2 lectures”. *TESOL Quarterly* 29: 345-373.
- Flowerdew, J. & Miller, L. (2010). “Listening in a second language”. In D. Wolvin (ed.) *Listening and Human Communication in the 21st Century*, 158-177. Chichester: Wiley-Blackwell
- Geertz, C. (1973). *The Interpretation of Cultures*. New York: Basic Books.
- Harrigan, J. A. (2008). “Proxemics, kinesics and gaze”. In Harrigan, J., Rosenthal, R.,

- Scherer, K. R. & Scherer, K. (eds.) *The New Handbook of Methods in Nonverbal Behavior Research*, 137-198. New York: Oxford University Press.
- Henderson, W. & Hewings, A. (1990). "A language of model building?" In T. Dudley-Evans & W. Henderson (ed.) *The Language of Economics: An Analysis of Economics Discourse. ELT Documents No. 134*, 43-54. London: MEP/British Council.
- Horowitz, D. (2007). *Indoctrination U.: The left's war on academic freedom*. New York: Encounter Books.
- Hyland, K. (2000). *Disciplinary discourses: Social Interactions in Writing*. Harlow: Longman.
- Jokinen, K., & Allwood, J. (2010). "Hesitation in intercultural communication: some observations and analyses on interpreting shoulder shrugging". In T. Ishida (ed.) *Culture and Computing*, 55-70. Berlin: Springer.
- Kendon, A. (2004). *Gesture: Visible Action as Utterance*. Cambridge: Cambridge University Press.
- Klamer, A. (1990). "The textbook presentation of economic discourse." In W. J. Samuels (ed.) *Economics as Discourse: An Analysis of the Language of Economists*, 129-154. Norwell: Kluwer.
- Kress, G. (2011). "Multimodal discourse analysis". In J. P. Gee & M. Handford (eds.) *The Routledge Handbook of Discourse Analysis*, 35-50. London: Routledge.
- Lemke, J. (2005). "Multiplying meaning: Verbal and visual semiotics in scientific texts". In J. R. Martin & R. Veel (eds.) *Reading Science: Critical and Functional Perspectives on Discourses of Science*, 87-114. London: Routledge.
- Lerman S. R. & Miyagawa S. (2002). "Open courseware: A case study in institutional

- decision making”. *Academe* 88: 23-28.
- Lincoln, Y. S. & Guba, E. G. (1990). “Judging the quality of case study reports”.  
*International Journal of Qualitative Studies in Education* 3: 53-59.
- Lipsey R. G., & Harbury C. (1992). *First Principles of Economics* (2<sup>nd</sup> ed.). Oxford:  
Oxford University Press.
- Machin, D. (2013). “What is multimodal critical discourse studies?” *Critical Discourse  
Studies* 10: 347-355.
- Machin, D. & Mayr, A. (2012). *How to Do Critical Discourse Analysis: A Multimodal  
Introduction*. London: Sage
- Mariani, M. D. & Hewitt, G. J. (2008). “Indoctrination U.? Faculty ideology and changes in  
student political orientation”. *PS: Political Science & Politics* 41: 773-783.
- McCloskey, D. N. 1985. *The Rhetoric of Economics*. Madison: The University of  
Wisconsin Press.
- Motta-Roth, D. (1995). “Book reviews and disciplinary discourses: Defining a genre.”  
*Paper presented at the 29th Annual Meeting of Teachers of English to Speakers of  
Other Languages*, March 26-April 1, Long Beach, California. ERIC Document  
Retrieval Service ED 404 858.
- Norris, S. (2004). *Analyzing Multimodal Interaction: A Methodological Framework*.  
London: Routledge.
- Northcott, J. (2001). “Towards an ethnography for the MBA classroom: A consideration of  
the role of interactive lecturing styles within the context of one MBA programme”.  
*English for Specific Purposes* 20: 15-37.

- Ochoa, X (2017). "Chapter 11: Multimodal learning analytics". In C. Lang, G. Siemens, A. Wise & D. Gasevic (eds.) *Handbook of Learning Analytics*, 129-141. New York: SoLAR (Society for Learning Analytics Research).
- Rogers, R. & Mosley, M. (2008). "A critical discourse analysis of racial literacy in teacher education". *Linguistics and Education* 19: 107-131.
- Royce, T. D. (2007). "Intersemiotic complementarity: a framework for multimodal discourse analysis". In T. D. Royce & W. L. Bowcher (eds.) *New Directions in the Analysis of Multimodal Discourse*, 63-109. Mahwah: Lawrence Erlbaum.
- Samuels, W. J. (1990). "Introduction." In W. J. Samuels (ed.), *Economics as Discourse: An Analysis of the Language of Economists*, 1-14. Norwell: Kluwer.
- Scherer, K. R. & Ekman, P. (2008). "Appendix. Methodological issues in studying nonverbal behaviour". In Harrigan, J., Rosenthal, R., Scherer, K. R. & Scherer, K. (eds.) *The New Handbook of Methods in Nonverbal Behavior Research*, 471-512. New York: Oxford University Press.
- Simon-Vandenberg, A.-M. (1997). "Modal (un)certainty in political discourse: A functional account". *Language Sciences* 19: 341-356.
- Tadros, A. (1994). "Predictive categories in expository texts." In M. Coulthard (ed.) *Advances in Written Text Analysis*, 69-82. London: Routledge.
- Thompson, P. (2006). "A corpus perspective on the lexis of lectures, with a focus on economics lectures". In K. Hyland & M. Bondi (eds.) *Academic Discourse Across Disciplines*, 253-270. New York: Peter Lang.
- van Dijk, T. A. (2001). "Multidisciplinary CDA: A plea for diversity". In R. Wodak & M. Meyer (eds.) *Methods of Critical Discourse Analysis*, 95-120. Thousand Oaks: Sage.

- van Leeuwen, T. (2013). "Critical analysis of multimodal discourse". In C. Chapelle (ed.) *Encyclopedia of Applied Linguistics*, 1-5. Oxford: Wiley-Blackwell.
- Weinberg, A., Fukawa-Connelly, T & Wiesner, E. (2013). "Instructor gestures in proof-based mathematics lectures". In M. Martinez & A. Castro Superfine (eds.). *Proceedings of the 35th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*, 1119. Chicago: The University of Chicago Press.
- Wittenburg, P., Brugman, H., Russel, A., Klassmann, A. & Sloetjes, H. (2006). "ELAN: A professional framework for multimodality research". *Proceedings of LREC 2006, Fifth International Conference on Language Resources and Evaluation*. Retrieved from [http://www.lrec-conf.org/proceedings/lrec2006/pdf/153\\_pdf](http://www.lrec-conf.org/proceedings/lrec2006/pdf/153_pdf).
- Woessner, M., & Kelly-Woessner, A. (2009). "I think my professor is a democrat: Considering whether students recognize and react to faculty politics". *PS: Political Science & Politics* 42: 343-352.

Appendix: Extract from Lecture 1: Introduction to Microeconomics (20:06 - 22:09)

1 Well, in this case, it's a similar thing. What determines the demand for a kidney? What  
2 determines the demand for a kidney is going to be the fact that you die without it. OK? If  
3 you have no kidneys, you're having kidney failure. OK? You'll die without it. So basically,  
4 what will determine it is people are willing to spend all their wealth, as much money as  
5 they can have, to get a kidney OK? So the demand will be quite high. The supply will be  
6 quite low. Sadly, not many people are willing to be organ donors. More relevantly, a lot of  
7 people aren't in good situations to be organ donors. OK? As a result, the supply is much  
8 lower than the demand. So we have a situation with a high demand, a low supply and the  
9 price went through the roof. That's a positive analysis. OK? So we can understand pretty  
10 intuitively. We don't need this course to understand why the price went up. OK? It's just the  
11 twin powers of demand and supply. But what about the normative question which is,  
12 should eBay have allowed this sale to happen? eBay at \$5 million cut it off and then passed  
13 the rule saying you can't auction your body parts on eBay. OK? Should they have done  
14 that? That's the normative question. That's where economics gets really interesting, which  
15 is, you know, your all are smart enough to figure out why the price went up. But this is  
16 where it gets interesting is should people have been able to auction their kidney on eBay?  
17 On the one hand, many, many people in this country die for want of a body part. OK?  
18 Thousands to hundreds of thousands of people die every year waiting for a transplant. OK?  
19 If someone is incredibly rich and they want a body part, which to me a surplus because I  
20 have two kidneys, why shouldn't they be allowed to buy it from me? I'm better off cuz they  
21 can pay me a ton of money. They are better off cuz they live. So I've just described a



22 transaction that makes both parties better off. Why shouldn't that be allowed to happen? So

23 you tell me.