

The Multimodality & Cyberpsychology Pop-Up Conference

What do these have in common?

The word cloud contains the following terms: Representation, Multimodal, Texts, Usability, Measures, Artistic, Disorders, Media, Preference, Intentions, Ethics, eLearning, Emotional, Reading, Eye, Movies, Tracking, Perceptions, Supports, Horror, Arousal, Social, Eating, Language, Cognition, Therapist, Evaluating, Dating, Culture, Self-Report, Comprehending, Intelligent, Physiological, and Online. The words are arranged in a circular pattern, with some in white, green, and blue.

The Psychological Society of Ireland
Cumann Siocolaithe Éireann
Special Interest Group for
Media, Art and Cyberpsychology

Proceedings of the Multimodality & Cyberpsychology Pop-Up Conference

Centre for Translation and Textual Studies

Dublin City University

Ireland

November 24th, 2012



Welcome to the Multimodality and Cyberpsychology Pop-Up Conference...

This collection of abstracts and extended abstracts captures a bird's eye view of the proceedings of the first MMCP 'pop-up' conference held in [Dublin City University](#) as a joint venture between researchers in the [Centre for Translation and Textual Studies](#) and the [Psychology Society of Ireland's](#) special interest group in [Media, Art, and Cyberpsychology](#).

The commonalities between the research carried out at the two centres was staggering, and this is a finding that we often come across in human-technology matters. Strong themes emerged throughout the conference: the role of the human in the loop, the effects of damaging and losing the human elements of technology, and the many, many positive effects that technology has on us, and, indeed, the fantastic feats we can achieve by using it effectively.

Listed in alphabetical orders, each of the scholars provides an accessible synopsis of their talk. Readers are reminded that the talk itself is a mere summary of the work of each of the scholars. Provided with each piece is a list for further reading, where related and fuller articles can be found, and links to other resources that have proven to be essential to the research discussed. Also provided are the contact details of the corresponding authors, so that those interested in their work can get in touch easily (please note: slides from the event may be requested from the authors themselves).

In closing, I would like to thank all of the researchers for their contribution and support of the conference, especially local support by Dr. Dorothy Kenny, director of the CTTS, and my colleague in SALIS, Dr. Ryoko Sasamoto. The resoundingly positive feedback and widespread coverage of the event has assured us that all of our efforts were worthwhile and we are certain that there will be another pop-up conference in the coming year.

Stephen Doherty

MMCP Organiser

stephen.doherty AT dcu.ie

A discourse analysis of interactions from a pro-anorexia forum

Manuela Ascari

Dublin City University

manuela.ascari2 AT mail.dcu.ie

This presentation illustrates part of the findings from my Masters by Research dissertation. In my research I have approached the phenomenon of online pro-anorexia websites by exploring conversations on a public pro-anorexia forum; focusing on how the forum members discuss their experiences of eating disorders and the body. In my presentation I share my results about a specific way that the forum members have of talking about the body, which I have called '*the biological body*' construction.

Following Malson (1998) and Potter and Wetherell (1987), I have conducted a discourse analysis of the forum members' body talk, observing recurring patterns as well as variations between patterns. In discourse analytic terms, these patterns are (discursive) constructions. The '*the biological body*' construction emerged as a key trope in my data. In presenting my findings, I will focus on its similarities with and differences from the "*the eating body*" construction described by Malson (1998: 125; emphasis added). In highlighting these aspects, I explain how the forum members verbalize, through these two constructions, particular relationships with their bodies.

Malson (1998) observed that '*the eating body*' was a prevalent construction on which the anorexic women she interviewed drew to make sense of their eating within their anorexic experience. Through examples taken from my own data, I show how in this construction, eating becomes something "wanted (by the body) and forbidden (by the mind)" (*ibid.*: 125); in particular, an urge of the body that the individual tries to resist. In these narratives, the body emerges as the women's "*other self*" (Bordo 1993: 155, original emphasis) and the source of disruptive impulses that threaten the individual's body-control efforts.

In my data, '*the biological body*' construction represents another way the forum members have to formulate their conflicting relationship with their bodies. In this construction, the body is presented as a machine-like system of inbuilt, self-regulated biological and metabolic processes. A conceptual shift can be observed in the interpretation of eating impulses, as the bodily urges of '*the eating body*' become biological, ingrained responses in the context of '*the biological body*'. Using extracts from the forum conversations, I exemplify the ways in which these biological impulses, as well as other metabolic processes (e.g. a slowed down metabolism), are presented as unruly and disruptive as the urges of '*the eating body*', but also, and unlike in '*the eating body*', as

potentially controllable and predictable. In the two constructions, different relationships of power and powerless over one's own body are then played out.

Crucially, in '*the biological body*', biomedical knowledge of the body is 'subversively appropriated' (Fox et al. 2005) to control, predict or compensate, if only at a conceptual level, for those bodily processes that pose a threat to the anorexic project of weight loss and body control. My findings contributes to existing work on the role that pro-anorexia members' appropriation of biomedical knowledge and tools plays in the formation of the pro-ana community as well as in people's daily, hands-on management of their weight- and body-control project (Fox et al. 2005; Fox and Ward 2006).

Further Reading

Bordo, S. (1993). *Unbearable Weighth: Feminism, Western Culture and the Body*. Berkely, Los Angeles and London: University of California Press.

Fox, N., and Ward, K. (2006). Health identities: From expert patient to resisting consumer. *Health: An Interdisciplinary Journal for the Social Study of Health, Illness and Medicine*, 10(4), 461-479.

Fox, N., Ward, K., and O'Rourke, A. (2005). Pro-anorexia, weight-loss drugs and the internet: An 'anti-recovery' explanatory model of anorexia. *Sociology of Health & Illness*, 27(7), 944-971.

Malson, H. (1998). *The Thin Woman. Feminism, Post-structuralism and the Social Psychology of Anorexia Nervosa*. London and New York: Routledge.

Potter, J., and Wetherell, M. (1987). *Discourse and Social Psychology*. London: Sage Publications.

Eye tracking and cognition: reading, comprehending, and using

Stephen Doherty

Dublin City University

stephen.doherty AT dcu.ie

This paper presents an overview of the application of eye tracking as a research tool in studies of cognition and human-computer interaction in the context of reading, comprehending, and using translated content in a variety of user-centred scenarios. We first explore the theoretical concepts underpinning eye tracking research by focussing on cognitive load theory and the eye-mind hypothesis. Aspects of motivation, attention, memory models, and attrition are all important foci for eye tracking research, especially concerning empirical studies of reading and usability, which are used as examples throughout.

Secondly, we present mixed-methods designs to demonstrate the value of this approach to studies of human behaviour, where the largely quantitative data derived from eye tracking are enriched by qualitative findings. This is exemplified in descriptions of further studies in language processing: reading studies, translation process studies, and human-computer interaction.

Thirdly, we move to more concrete topics of eye tracking techniques including equipment and software with a summary of the strengths and shortcomings of each approach: search coil; head-mounted; and remote units.

Fourthly, we present data from 1) a study of reading and comprehension of machine-translated content in two experimental conditions: pre-processed and 'raw', and 2) a study of the usability of machine-translated content.

The first study examined how 25 native speakers of French read and understand a series of technical support documentation, where 12 participants read text that had been written in accordance with linguistic pre-processing (e.g. controlled technical authorship, rules for spelling and syntax, and a style guide) against an earlier version of the documentation that did not contain these constraints, which was seen by the remaining 13 participants. The results show significant reductions in the amount of cognitive effort exerted in the reading of the pre-processed text, and significant more favourable user ratings.

The second study examined the differences in the usability of machine-translated content to carry out tasking using a cloud-based file storage tool. Participants (n = 30) were split into four groups according to their native language: English, French, German, Spanish,

and Japanese, and carried out a series of tasks, after which a retrospective interview took place. Results show significant differences in usability where English-speaking users (where the text was originally in English and translated automatically into the other three languages) were more satisfied and effective in their tasks compared to the German and Japanese users, however, only slight differences existed between the English users and the French and Spanish groups. This finding supports the argument that machine translation quality can go beyond current 'gist' quality, yet human intervention in the form of post-editing and quality assessment is required to ensure the best user experience.

Areas of application and improvements for both studies are discussed and highlight the necessity to include mixed-methods studies of human behaviour. Issues of differences between data and opinions expressed by participants, and that of automated scripts to evaluate translation quality were noteworthy given the widespread usage of the latter.

Lastly, a series of lessons learned are summaries with emphasis on: openness to methodology, incorporation of human element into research on humans, new approaches to data analysis, and the limitations of eye tracking research.

Further Reading

Doherty, S. 2012. Investigating the effects of controlled language on the reading and comprehension of machine translated texts: a mixed-methods approach. PhD, Dublin City University. Available from: <http://doras.dcu.ie/16805/>

Doherty, S. & O'Brien, S. 2012. A user-based usability assessment of raw machine translated technical instructions. *AMTA-2012: the Tenth Biennial Conference of the Association for Machine Translation in the Americas*. Proceedings, San Diego, CA, October 28 – November 1, 2012. Available from: <http://www.mt-archive.info/AMTA-2012-Doherty-2.pdf>

Doherty, S., O'Brien, S. & Carl, M. 2010. Eye tracking as an MT evaluation technique. *Machine Translation*, 24, 1. Springer: London. Available from: <http://link.springer.com/article/10.1007/s10590-010-9070-9>

Doherty, S. & O'Brien, S. 2009 Can MT output be evaluated through eye tracking? *MT Summit XII: proceedings of the twelfth Machine Translation Summit*, August 26-30, 2009, Ottawa, Ontario, Canada; pp.214-221. Available from: <http://www.mt-archive.info/MTS-2009-Doherty.pdf>

Further Reading on Eye Tracking

Rayner, K. and Pollatsek, A. 1989. *The Psychology of Reading*. Englewood Cliffs, NJ: Prentice-Hall.

Rayner, K. and Sereno, S. 1994: Eye movements in reading: psycholinguistic studies. IN: Gernsbacher, M.A. (ed.). Handbook of Psycholinguistics. New York: Academic Press, pp. 57–81.

Rayner, K. 1998. Eye movements in reading and information processing: 20 years of research. *Psychological Bulletin*, 124, pp. 372-422.

O'Brien, S. 2010. Eye tracking in translation process research: methodological challenges and solutions. *Copenhagen Studies in Language*, 38, pp. 251-266.

Kaakinen, J., Hyönä, J. and Keenan, J. 2003. How prior knowledge, WMC, and relevance of information affect eye fixations in expository text. *Journal of Experimental Psychology: Learning, Memory and Cognition*, 29 (3), pp. 447-457.

Just, M. A. and Carpenter, P. A. 1980. A theory of reading: from eye fixations to comprehension. *Psychological Review*, 87 (4), pp. 329-354.

Jakobsen, A. L. and Jensen, K. T. H. 2008. Eye movement behaviour across four different types of reading task. IN: Göpferich, S., Jakobsen, A. L. and Mees, I. M.(eds). *Looking at Eyes: Eye-Tracking Studies of Reading and Translation Processing*, Copenhagen Studies in Language 36. Copenhagen: Samfundslitteratur, pp. 103-124.

Cultural homophily: the preference for same culture language in online dating profile texts.

Nicola Fox Hamilton

Wolverhampton University

[hello AT nicolafoxhamilton.com](mailto:hello@nicolafoxhamilton.com)

Homophily is the tendency for individuals to bond and associate with others similar to themselves. Online daters show strong preferences in mate selection towards those with similar attributes to themselves. Across areas of attractiveness, socioeconomic status, ethnicity, religion, marital status, smoking, occupation and education daters consistently choose others with similar views or characteristics, more often in their actions in contact and response to others than in their stated preferences.

Personality traits have been found to have different average levels across countries, and differences have been found in the levels of extraversion, psychoticism and the lie-scale between Ireland and America. Ireland is higher in psychoticism; America is higher in extraversion and higher on the lie-scale. Personality is encoded and expressed through the language people use and analysis can reveal personality of an author in pieces of text.

This research investigated whether online dating “About Me” profile texts, containing language manipulated to reflect average cultural personality traits, would be more attractive to members of that culture than to those outside of it.

150 Irish male and 150 American male “About Me” profile texts were examined for language variables related to personality. Average cultural personality traits were found that matched previous research. From this analysis five profiles were created and manipulated to contain culturally typical language for the Irish and American profiles. Two profile texts were created with a typically Irish style of language, with one using positive language and one with some negative language. Two American profiles were created, one with positive language and one with some negative language. One profile was created, designed to be halfway between an American and Irish profile text with positive language.

The sample profiles were presented to 61 Irish and 60 American female participants who rated the profile texts for attractiveness and indicated whether they would respond to a communication from the author.

It was expected that each culture would find their own cultures’ profile texts to be more attractive and this was found to be the case with the positive language profiles.

Americans rated the positive American profile as most attractive, and the Irish participants rated the positive Irish profile most attractive. Both nationalities rated the mixed Irish and American experimental profile second most attractive which indicates that a profile containing half of the culturally typical language is more attractive than a positive profile with language entirely from the other culture. Both cultures rated the other culture's positive profile third most attractive. This demonstrates that presenting a positive profile is more important than presenting a negative profile that fits the cultural language or personality.

Interestingly both cultures rated the negative American profile as least attractive. This may indicate that homophily is slightly more important to Irish daters and they prefer even the negative profile from their own culture to the American one, or it may only indicate that the negative American profile is overall more unattractive than any others.

As the experimental profiles were designed not to differ in content, but instead in functional language, this suggests that participants picked up on cues in the language in order to determine attractiveness rather than in specific activities or interests of the experimental author.

Further Reading

Fiore, A. T., & Donath, J. S. (2005). Homophily in online dating: When do you like someone like yourself? *Computer-Human Interaction 2005*, 1371–1374.

Fiore, A. T., Taylor, L. S., Zhong, X., Mendelsohn, G. A., & Cheshire, C. (2010). Who's right and who writes: People, profiles, contacts, and replies in online dating. *In proceedings of Hawaii International Conference on System Sciences*, 43, Persistent Conversation minitrack.

Hitsch, G. J., Hortaçsu, A., & Ariely, D. (2010). What makes you click? Mate preferences in online dating. *Quantitative Marketing and Economics*, 8(4), 393-427. doi: 10.1007/s11129-010-9088-6

Kirby, S., Dowman, M., & Griffiths, T. L. (2007). Innateness and culture in the evolution of language. *Proceedings of the National Academy of Sciences of the United States of America*. 104(12), 5241–5245.

Lester, D. (2000). National differences in neuroticism and extraversion. *Personality and Individual Differences*, 28(1), 35–39.

Van Hemert, D., van De Vijver, F., Poortinga, Y., & Georgas, J. (2002). Structural and functional equivalence of the Eysenck Personality Questionnaire within and between countries. *Personality and Individual Differences*, 33(8), 1229–1249.

The ethics of machine translation

Dorothy Kenny

Dublin City University

dorothy.kenny AT dcu.ie

In this paper I first describe the two main approaches to machine translation research, and suggest that the second of these, statistical machine translation, can cause some malaise even among technophile translation scholars. As some of the issues that arise are ethical in nature, I consider what an ethics of machine translation might involve, before considering the ethical stance adopted by some of the main protagonists in the development and popularisation of statistical machine translation, and in the teaching of translation.

Further Reading

Burkhardt, M. & Brass, M. (1990). Changing patterns or patterns of change: The effects of a change in technology on social network structure and power. *Administrative Science Quarterly*, 35: 104-127.

Doherty, S., Kenny, D. & Way, A. (2012). Taking statistical machine translation to the student translator. *AMTA-2012: the Tenth Biennial Conference of the Association for Machine Translation in the Americas*. Proceedings, San Diego, CA, October 28 – November 1, 2012.

Hearne, M. & Way, A. (2011). Statistical Machine Translation: A Guide for Linguists and Translators. *Language and Linguistics Compass*, 5: 205-226.

Kenny, D. (2010). The Ethics of Machine Translation, *In: Ferner, Sybille (ed.) New Zealand Society of Translators and Interpreters Annual Conference, 10-JUL-10 - 11-JUL-10, Christchurch, New Zealand*, pp. 121 – 131.

Kenny, D. (2011). Translators: the human element in machine translation, *Mediterranean Editors & Translators Meeting (METM 2011)*, 20-OCT-11 - 22-OCT-11, Barcelona, Spain.

Kenny, D. & Way, A. (2001). Teaching Machine Translation and Translation Technology: a Contrastive Study. *In Proceedings of the MT Summit VIII Workshop on Teaching Translation*, Santiago de Compostela, Spain, 13-17.

Evaluating therapists' perception of using artificial intelligent based supports

Dean McDonnell

Dún Laoghaire Institute of Art, Design and Technology

[deanmcdonned AT gmail.com](mailto:deanmcdonned@gmail.com)

While highlighting studies that demonstrate technologies as being highly valuable tools for therapists, this research involves the use of Artificial Intelligence for the ultimate aim of designing a programme specifically for therapists to use to conduct additional methods of therapy. Using a mixed method design, a total of 130 qualified therapists from Ireland, European, and other international countries, were asked to complete an online survey. Wanberg *et al.*'s (2007) e-Therapy Scale, Liaw's (2002) Computer Attitude Scale, Web Attitude Scale, and 3 Artificial Intelligence questions were asked and combined to evaluate the attitude of participants towards the use of an Artificial Intelligence based support designed for therapy. A range of correlations were found between a number of variables within this study which further highlights the growing interests and ranging attitudes of the use of technology within healthcare.

A study of students' use of the Discussion Board in Blackboard on a distance learning course

Elizabeth Quinn

University of Leicester

[quinneliz AT gmail.com](mailto:quinneliz@gmail.com)

Blackboard is a Virtual Learning Environment (VLE) used by Distance learning students on the Masters in Occupational Psychology course at the University of Leicester to gain access to course information and study materials. The Discussion Board (DB) feature provides students with the opportunity to explore, question and comment on course material with other students and receive feedback from lecturers, but there are varying levels of student usage.

This research looks at what factors influence students to use, or indeed not use, the DB and how they use the functions provided. The findings may help to inform the Course team on ways in which the DB may be improved to address student concerns and perhaps increase student participation.

The DB for the Training and Development module of this course was monitored with seventeen students' and two tutors' posts categorized by, for example, post content; post tone; post type; thread/post titles; post length; 'opening' and 'closing' salutations used; and language, using a Microsoft Excel Spreadsheet. Telephone interviews were also carried out with nine students with questions relating to what students liked or disliked about the DB; what their objectives were in using it; how they used it; why they thought others may not use it; and what changes, if any, they would like for future Discussion Boards.

Cultural Historical Activity Theory (CHAT) (Engeström, 1987) was used to assist with the design of the study with Mwanza's 8-step model used to focus on specific research areas; framing the interview questions; and assisting with analysing the data collected (Mwanza, 2001). CHAT is viewed as a valid means of research in the areas of Human-Computer Interaction (HCI) and Interaction Design (ID) as it facilitates the study of a user interface such as this DB by focusing on 'a group of users' rather than solely on an individual (Bödker, 1989).

Findings suggest many students experience difficulties navigating the DB and finding relevant information. Students are very reluctant to post and are anxious about how their posts will be viewed by others. Students use DBs primarily for assignment information and guidance, and not as a means to connect with other students or study.

Suggestions for improvement include a re-design of the thread layouts and DB appearance; a 'search' facility within the course module material; email alerts for new posts; introduction of online 'real-time' discussions; and maintaining an active DB for students with assignment or course extensions.

Further Reading

Barbeite, F. G., & Weiss, E. M. (2004). Computer self-efficacy and anxiety scales for an internet sample: Testing measurement equivalence of existing measures and development of new scales. *Computers in Human Behavior*, 20, 1-15.

Bødker, S. (1989). A Human Activity Approach to User Interfaces. *Human-Computer Interaction*, 4 (3), 171.

Davies, J., & Graff, M. (2005). Performance in e-learning: Online participation and student grades. *British Journal of Educational Technology*, 36 (4), 657-663.

Engeström, Y. (1987). *Learning by Expanding: An Activity Theoretical approach to Developmental Research*. Helsinki: Orienta-Kondultit.

Flores, J. F. (2006). The first letter in individual: An alternative to collective online discussion. *Teaching English in the Two Year College*, 33(4), 430.

Heissen, R. K., Jr., Glass, C. R., & Knight, L. A. (1987). Assessing computer anxiety: Development and validation of the computer attitude rating scale. *Computers in Human Behavior*, 3(1), 49-59.

Lang, M., & Costello, M. (2009). "An investigation of factors affecting satisfactory student learning via on-line discussion boards". Paper Presented at the m-ICTE2009 Conference, Lisbon, Portugal.

Mwanza, D. (2001). Where Theory meets Practice: A Case for an Activity Theory based Methodology to guide Computer System Design. *Proceedings of INTERACT' 2001: Eighth IFIP TC 13 Conference on Human-Computer Interaction*, 9-13 July 2001, Tokyo, Japan [on-line]. Available from: http://oro.open.ac.uk/11804/1/Daisy_Japan_Interact_2001.pdf.

Norton, P., & Hathaway, D. (2008). Exploring two teacher education online learning designs: A classroom of one or many? *Journal of Research on Technology in Education*, 40(4), 475-495.

Pulford, B. D. (2011). The influence of advice in a virtual learning environment. *British Journal of Educational Technology*, 42 (1), 31-39.

Quinn, E. (2009). A study of users' use of blackboard in UCD: Can the interface be improved? Unpublished Conference Paper, University College Dublin.

University of Maryland, Baltimore County (UMBC). (2002). UMBC blackboard usability study:
Blackboard user analysis [on-line].
<http://www.umbc.edu/oit/newmedia/blackboard/usability/>

Using mixed measures of emotion to explore viewer experience of 3D film realism

Brendan Rooney, Ciarán Benson, and Eilis Hennessy

Dún Laoghaire Institute of Art, Design and Technology

brendan.rooney AT iadt.ie

Since the Lumière brothers hosted the first public screening of a motion picture in 1895, historical developments of cinema technology, such as 3D effect, surround sound, CGI and high definition, have made the viewers' experience more realistic. Yet, even a story with simple shadow puppets can make our emotions soar. One might wonder if these developments are even necessary. James Cameron's 3D blockbuster *Avatar* was made famous by its use of all the above mentioned techniques to increase the film's realism. In 2010, *Avatar* smashed all box office records around the world and is currently the highest grossing movie worldwide (over \$2.7 billion). Presumably, these developments will continue and the movies we see in the cinema will seem increasingly realistic. With these ideas in mind, the current study seeks to explore the impact of such visual realism on the psychological experience of movie-watching and its associated emotions.

In this study, we showed a series of disgust/horror film clips (taken from *Bugs 3D*, *Friday 13th*, *Jaws 3-D* and *Frankenstein*) to 29 participants. Half the participants viewed the clips in 3D, the others in 2D. To ensure any effects of the 3D format were not due to novelty, all the participants watched an abridged version of *Journey to the Centre of the Earth* in 3D, at least 24 hours prior to the study proper.

Participants in the 3D condition reported finding the film clips more realistic. They also had a higher heart rate whilst watching the clips compared with participants in the 2D condition. However, there was no difference in amount of skin conductance (another measure of arousal) between the two groups, and no difference in how much they said they enjoyed the clips. So how do we interpret these findings?

Skin conductance - that is, the skin's sweatiness - is influenced only by the sympathetic nervous system (which triggers the fight or flight response) and not by the parasympathetic nervous system (which calms us down). By contrast, heart rate is influenced by both. This suggests that the calming parasympathetic nervous system is less active in viewers of 3D. Why would this be so? Well, one theory for how we calm our emotions during films is by reminding ourselves that they're not real. The 3D viewers said they found the viewing experience more realistic and it's possible that this made it more difficult for them to step outside of the experience, leaving their emotional response relatively unchecked. Importantly, the causal direction could also run the other way - the 3D viewers raised heart rate could cause them to perceive the experience as more realistic. Most likely the influences are bi-directional.

While this is an exploratory study and more research is needed, for now we conclude the suspension of disbelief is assisted by stereoscopic depth, with associated increases in reported perceived apparent reality and in heart-rate.

Further Reading

Rooney, B., Benson, C., and Hennessy, E. (2012). The apparent reality of movies and emotional arousal: A study using physiological and self-report measures, *Poetics*, 40 (5), 405-422 DOI: [10.1016/j.poetic.2012.07.004](https://doi.org/10.1016/j.poetic.2012.07.004)

<http://ccta.iadt.ie/ccta/staffcv.php?staffid=24>

<http://twitter.com/brenrooney>

<http://www.linkedin.com/pub/brendan-rooney-phd-mlitt-ba-hons/2a/96a/938>

<http://iadt-ie.academia.edu/BrendanRooney>

https://www.researchgate.net/profile/Brendan_Rooney/

Multi-media, multi-modal and multi-intentions

Ryoko Sasamoto*, Stephen Doherty*, and Kyoko Arait†

Dublin City University and Toyo University†*

ryoko.sasamoto AT dcu.ie

This study is an attempt to develop the current paradigm in pragmatics to account for the higher-order intention in multi-modal communicative contents. We also take a mixed-method approach and aim to provide an experimental data to support a theoretical analysis in an existing framework of relevance theory. We first present an overview of the existing scope of pragmatics that often focuses on utterances. We then examine a range of examples from multi-modal contents, such as advertisements and TV programmes. In order to account for multi-modal contents, a two-levelled interpretation process is proposed where a higher-order intention interacts with standard ostensive-inferential processing.

This two-levelled interpretation process is applied to the analysis of persuasive intention, where a range of TV commercials that aim to improve a brand image are examined. Working within Sperber and Wilson's (1986 / 1995) relevance theory, we explain viewers' interpretation process that advertisers can exploit in creating such advertisements. We conclude that mechanism of brand image building can be explained in terms of relevance theoretic notion of weak communication.

We then show how TV producers can manipulate audiences' interpretation process by using dynamic Open Caption Telop (OCT). Again, the two-levelled interpretation process forms the basis of this analysis where the TV producers' intention is communicated to the viewers by imposing extra stimulus which then plays a role of a highlighting device in the standard ostensive-inferential processing.

Finally, we present an overview of the results from eye-tracking experiments using 15 native and 5 non-native speakers of Japanese, in which participants were separated into two groups: 1) static subtitles and 2) dynamic subtitles. Both groups viewed a ten-minute high-quality video of a popular Japanese entertainment show. Static, or more traditional subtitles, resulted in similar numbers of fixations to the dynamic, or *pop-up*, subtitles ($p > .05$). However, the average duration of these fixations differed significantly between groups, where group 2 had far greater durations ($p < .05$). These findings indicate that the subtitles were attended to and read by both groups, yet the dynamic subtitles required more cognitive processing effort in terms of the longer fixations on the subtitle text.

This study expands Sasamoto (2012) to a more applied area of research in that it now involves experimental data analysis using eye-tracking technologies as well as theoretical analyses of multi-modal discourse using existing framework in linguistics. The

outcome of this study is that relevance theory, a cognitively-grounded theory of communication, can account for a cognitive mechanism that advertisers or TV producers can hijack for their own purposes such as a brand image building, in the case of advertising, or creating laughter, in the case of OCT use. This area has not been dealt with in cognitive pragmatics. This study, therefore, paves the way for the practical application of relevance theory in a wider context.

Further Reading

Arai, K & R. Sasamoto (2012) Advertising, brand image building and weak communication. Paper delivered at *Interpreting for Relevance: Discourse and Translation*. Warsaw (Poland), September

Sasamoto, R (2012) Subtitles, Humour and Irritation: Attempts at Viewer Manipulation on TV., *Manchester and Salford New Researchers Forum in Linguistics, 02-NOV-12 - 03-NOV-12, Manchester, UK*

Sperber, D. and Wilson, D. 1986 / 1995. *Relevance : communication and cognition*. Oxford: Blackwell.

Sperber, D. & Wilson, D. (1987a) Précis of Relevance. *Behavioral & Brain Sciences* 10.4. 697-710.