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The Digital Debate in L2 Context: Influence of Presentation Media and Language on Reading

Comprehension for English L2 Speakers

Abstract

The effectiveness of reading from a screen in comparison to reading from paper has been widely debated in literature. While factors such as text type and text structure have been carefully analysed in the context of cognitive load theory and working memory capacity, possible influence of L1 and L2 has not been considered yet. The present study investigates the effects of language, text type, and medium on reading comprehension in Dutch and L2 English. Sixteen Dutch bachelor students of English participated in a reading comprehension experiment. The participants were asked to read several different linear English and Dutch texts, either on a computer screen or on paper. A short series of inductive multiple-choice comprehension questions followed after each text. No difference in reading comprehension was found when comparing medium, but text type had a significant main effect on reading comprehension. Language as a main variable seemed to have no significant negative or positive effects on performance, even when making comparisons across different text types. Explanations of the varying effects and implications of cognitive load and multimedia principles on reading comprehension are discussed, together with limitations of the study in regard to readers' behaviours. The varying yet insignificant effect of language shows more research is required on this subject to reach a proper conclusion.

Keywords: Language, Dutch, English, comprehension, reading, cognitive load, linear text, text type, medium, digital reading

The Digital Debate in L2 Context: Influence of Presentation Media and Language on Reading Comprehension for English L2 Speakers

Introduction

There are many different ways of defining reading comprehension. According to Nuttal (1996), reading comprehension is defined as an attempt to infer the intended meaning of the author. Grabe and Stoller (2001) define reading as the ability to understand the meaning from a printed page and subsequently interpret it accordingly. With the development of new technology and software, digital reading has become ubiquitous in the present day and aforementioned definitions can most certainly be expanded upon. In comparison to reading on paper, digital reading allows for unprecedented flexibility and new dynamic possibilities when it comes to information presentation. Nevertheless, there are still some caveats which need to be addressed, one of which being the discussion about the effects of using digital texts instead of texts on paper on information processing. In early years, reviews of research generally seemed to suggest that manipulating electronic text (i.e. reading it, processing it, using it, etc.) is more difficult than manipulating text on paper (Dillon, 1992). However, more recent reviews show that while it is difficult to achieve equivalence when comparing computer- or paper-based tasks, there is certainly more of a blurred distinction between the two media (Jabr, 2013; Noyes & Garland, 2008). This is in part because there are several factors which influence performance of users.

More specifically, while eye strain caused by the exposure to the screens themselves might have an effect on long-term memory retention (Noyes and Garland, 2003; Garland and Noyes, 2004), it is ultimately difficult to control for related variables. Ensuring that lighting conditions, screen exposure and refresh rates are all kept similar between participants is challenging. Aside from that, familiarity with the platform affects how a certain medium is used, and in turn, can also determine how effectively it is used (Noayes & Garland, 2008;

Chen et al., 2014). Users of digital texts who are familiar with certain interactive features (e.g. hyperlinks, bookmarks, annotation tools, etc.) can use them to their advantage to optimise the reading process. This advantage is somewhat counteracted by the increased cognitive load caused by the increased decision-making and visual processing that come with it (DeStefano, LeFevre, 2007). Furthermore, users also tend to dislike complex digital features because of how disorientating and confusing the overall experience can be if such features are not used to their maximum effectiveness (Heo & Hirtle, 2001; Miall & Dobson, 2001). DeStefano and LeFevre (2007) mention that hypertexts, which tend to have complex digital features in the form of hyperlink-based content, contain elements that introduce novel structures or require additional processing. These elements generally cause a decrease in comprehension by users when comparing them to linear texts. This means that the increased cognitive load cannot necessarily be attributed to just the degree of interaction. A small change can therefore also cause increased cognitive load if the information is presented differently. However, the degree of cognitive load is heavily dependent on prior knowledge of learners regarding text topic, and the disadvantages of hypertext learning tend to disappear once learners have reached a certain variable threshold (Lawless & Brown, 1997).

Based on the aforementioned findings, it might be more useful to make a direct comparison, and look at readers rather than users. In other words, rather than comparing how users *interact* with a text using certain digital tools or features, more insight might be gained from investigating solely how they read and analyse a text, as it eliminates some variables. While earlier research on reading speeds seems to indicate that the usage of high-quality displays does not impede the reading speed, there is not much agreement on the finding that reading comprehension is impaired when reading from a screen (Margolin, Driscoll, Toland, & Kegler, 2013; Pomplun, Frey, & Becker, 2002). This most likely has to do with the usage of different kinds of texts, different settings, and different ways of testing. Most notably, the

kind of text can play a large role in reading comprehension. Mangen, Walgermo, and Brønneck (2013) suggest that reading on computer screens leads to poorer reading comprehension with expository (i.e. informative) texts due to the requirement of scrolling and a lack of spatiotemporal markers, and leads to extra cognitive load in certain contexts. This finding was not replicated with narrative texts, which showed short stories with character narratives. A physical copy (which also has a more concrete and clear structure due to its physicality) is assumed to aid in the creation of a mental reconstruction of the text.

Sweller's Cognitive Load Theory (CLT) (1994) can be used to further dissect the cognitive load challenges that come with processing information. According to Sweller, there are three components which determine the total cognitive load during a learning process: intrinsic load, extraneous load, and germane load. The main principle is that as there is very limited capacity for information storage in working memory, certain loads need to be kept as low as possible for effective learning to occur (Zumbach and Mohraz, 2007). The intrinsic load is caused by the inherent complexity of the material, and is not easily influenced by prior knowledge. The extraneous cognitive load, on the other hand, can be influenced, as it is determined by external factors outside of the learning process which provide unnecessary or redundant information. Germane load contains all relevant learning activities, and can increase when intrinsic and extraneous loads are minimalised. When the germane load is increased, more resources are devoted to learning, which in turn improves the effectiveness of the learning process. In the context of learning activities, this usually boils down to presenting related content side-by-side, scaffolding the experience with clear and concise information, and keeping the expertise of the learner in mind throughout a learning process (Yeung, Jin, & Sweller, 1997).

In the case of reading comprehension, it is the external factors related to the information presentation that provide extraneous load which might hinder reading

comprehension (and ultimately, the learning experience as well). An example of this is differences in spatial layout, which can have a significant effect on readers' behaviour. A text with strong spatial contiguity also results in better reader comprehension (Halsanova, Holmberg, Holmqvist, 2008). When two sources of information are split up, and are not in close proximity for a reader's view, the construction of a mental model of the material is made more difficult as well (Halsanova et al., 2008). However, there is no reason to assume that every reader is affected by this in the same manner. Experts in a certain area read differently than novices, analysing a text according to their expertise (Shanahan, Shanahan, & Misischia, 2011). Of course, intrinsic load is also lower with expert readers, which in turn causes reduced overall cognitive load. It is to be expected of experts that their reading behaviours are altered based on their experience. This is not only related to what perspective is used to approach a text, but also related to the employed reading tactics. Therefore, learner expertise must be kept in mind when analysing reading comprehension performance.

The capacity of working memory also plays an important role in reading comprehension, especially regarding the tasks characterised by inferential reading or attention control (Alptekin & Erçetin, 2010; McVay & Kane, 2011). There are several ways to analyse the relationship between working memory and comprehension. Reading speed is commonly used in conjunction with comprehension questions. While it is a strong predictor of global reading skills, reading comprehension rate (the amount of questions correctly answered within a given timespan) is nevertheless a relevant predictor (Skinner et al., 2009). Furthermore, Skinner et al. (2009) specifically looked at lower-school pupils, for whom vastly different texts and tests were used than for middle-school and up. They found that there might even be a reverse relationship between reading comprehension rate and working memory, Dyson and Haselgrove (2001) found that medium line length (55 characters per line) and a slow reading speed lead to the highest level of comprehension in comparison to

higher reading speed and shorter/longer line lengths. This finding suggests that it is important not to rely on reading speed as a single measurement of reading skills.

In the context of first (L1) and second language (L2), language can have an effect on working memory. According to Walter (2004), successful mental structure-building is directly associated with the level of success in L2 reading comprehension. Based on their study, good reading comprehension skills in L1 do not guarantee better construction of mental structures of L2 texts. In addition to this, Alptekin and Erçetin (2010) specifically examined reading span for L1 and L2 to analyse the working memory capacity. Significant differences were found between reading span and working memory in regards to processing capacity, with L1 being more accurate in reading span tasks compared to L2. Reading span tasks are employed with the intent of determining maximum recall capacity. While reading span might not be the most accurate measure to determine overall comprehension, the interplay between L1 and L2 is actually quite relevant here as well, because it shows that L1 and L2 as a variable might play a role in processing and recall.

One element which has not been analysed yet in literature is the effect of language on reading comprehension for L2 readers when comparing different media. Al-Shehri and Gitsaki (2010) have looked at cognitive load for L2 students in online reading, but this was to see the effects of split attention caused by splitting up the text and resources, and he did not compare the effects of split attention to on-paper reading. The main finding was that integrating comprehension questions in text increased comprehension by reducing extraneous cognitive load in an L2 context. Aside from that, literature is very limited in this regard. L1 and L2 readers up until now have not been compared in reading comprehension using text type and medium combined as variables. Based on aforementioned research, the additional cognitive demands that come with using a L2 language might have a significant effect on the

reading comprehension for certain texts types. Based on this, the following research question can be formulated:

In what way does the selected medium and language influence the reading comprehension of L1 and L2 readers for different text types?

Based on earlier findings (Walter, 2004; Alptekin & Erçetin, 2010; Mangen, Walgermo, and Brønnick, 2013), reading comprehension is hypothesised to be worse with expository texts in L2 than in L1 when reading from a screen, but less so when reading from paper. To test my hypotheses, I have conducted a reading comprehension experiment with advanced Dutch learners of English in both Dutch and English.

Method

Participants

Sixteen advanced L2 speakers of English participated in the experiment, six of which were male, and ten of which were female. All participants were first- to third-year Dutch bachelor students of English from the same university, and were between 18 and 27 years old ($M = 20.1$, $SD = 1.96$). They consisted of a mix of L2 speakers of English ($N = 13$) and simultaneous bilingual speakers. They were suitable for this study as they already had some experience with reading English texts at an academic level, and thus formed a homogenous group in regards to expertise and prior knowledge. None of the participants claimed to have any disability related to reading comprehension or attention span (e.g. ADHD, dyslexia, etc.).

Material

Participants received four texts targeted at a C1 level according to the Common European Framework of Reference for Languages (CEFR). This framework is used as a reference for language proficiency-based European standards (North, 2005). The CEFR uses a total of six different levels to denote fluency in a given language. C1 level involves effective operational or advanced proficiency, and is appropriate for English learners on an academic level. The texts and corresponding questions were originally used as practice material for the reading part of Cambridge English Language Assessment examinations, and were selected for this experiment because the texts in question were designed with C1 level specifically in mind. Furthermore, both narrative and exploratory texts were used in the material but with similar questions, as the questions for both categories generally require readers to make inferences and conclusions based on the material. All texts and questions used for this experiment can be found in Appendix A and B. The texts were either in English (L2) or Dutch (L1). The Dutch texts were translated from the original English texts using segmented computer-aided translation (Google Translate, 2017). Translation software was

used to translate segments of the texts first, and was edited for grammar and structure afterwards. Since only four texts were used per participant, translated texts were used with the intention of minimalizing variance caused by the possible differences by the difficulty of texts and questions. The texts were between 750 and 902 words long, and were structured using single spacing and the font Times New Roman, font size 12. LCD displays with a resolution of 1920x1080 pixels were also used for this experiment (which were placed in well-lit classrooms).

Procedure

The participants' task was to read a number of texts and answer 6-7 multiple choice questions after each text. The texts were presented using two different media: eight participants received the text on paper and the other eight participants received the text on a LCD computer display. The questions were always presented on the computer screen for consistency during the testing. The texts were assigned to the participants following a Latin square design such that each participant received four texts, two of which were narrative texts, and the remaining two were expository texts, and never read the same text in both languages. Which texts were in English and which texts were in Dutch varied between participants, resulting in a total of eight possible text-presentation medium combinations. After the reading comprehension tasks, participants filled in a short questionnaire. The questionnaire asked about their preference for certain media, proficiency in other languages, language background, and frequency of use of media. The experiment lasted about 50 minutes on average.

Results

In the questionnaire, the overwhelming majority claimed to prefer to read on paper, with only one speaker having no preference. However, ten of the participants used a screen more often to read from on a daily basis, while five participants estimated they used paper just as often as a screen for reading. Only one participant claimed to be reading from paper more often.

Scores from the sixteen participants were processed and analysed using an ANOVA repeated measures mixed design analysis in SPSS (version 24.0, Nie & Bent, 2013).

Unrounded decimal fractions were used to document scores during analysis. The scores were based on the number of points received from the 25 total questions. The lowest number of correct answers was 14 (0.56), while the highest number of correct questions was 21 (0.84). Therefore, no participant received a perfect score. However, multiple participants answered questions for specific texts without error. This was the case for all texts, including the translated L1 texts. The raw data which displays the scores per participant can be found in in Appendix C. 'Medium' was defined as the between-subject factor, while 'language' and 'text type' were defined as the within-subject factors. A Levene's test of equality of error variances was conducted between variables, and no significant values were found with any variable, confirming the null hypothesis of equal error variance across groups.

An overview of the results from the analysis is summarised in Table 1. A significant main effect at $p < 0.05$ was found of text type on reading comprehension performance ($p = .038$). Figure 1 shows that average performance was higher for narrative texts ($M = .763$, $SD = .030$) in comparison to expository texts ($M = .630$, $SD = .043$). No other main effects were found. Although interactions were observed between medium and language, but they did not reach statistical significance ($p = 0.160$). This was also the case for text type and medium ($p = .109$). The three-way interaction of language x medium x text type also did not reach

statistical significance ($p = 0.793$). However, the data did reveal potentially interesting patterns. More specifically, there appeared to be an inverse relationship between text type, medium, and language. For the Dutch as L1 condition, expository texts were done worse digitally ($M = .542$, $SD = .076$) than on paper ($M = .729$, $SD = .076$), while narrative texts were done approximately equally well. For the English as L2 condition, the pattern was reversed. Narrative texts were done better digitally ($M = .860$, $SD = .054$) than on paper ($M = .705$, $SD = .054$), but expository texts were done equally well.

Table 1. Degrees of Freedom, Mean Square, F- Value, and P-value for with-subject and between-subject effects,

Source	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>
Language	1	.003	0.066	.802
Language * Medium	1	.109	2.199	.160
Text_type	1	.284	5.250	*.038
Text_type * Medium	1	.125	2.311	.151
Language * Text_type	1	.010	0.351	.563
Language * Text_type * Medium	1	.002	0.072	.793
<i>Note.</i> * $p < 0.05$.				

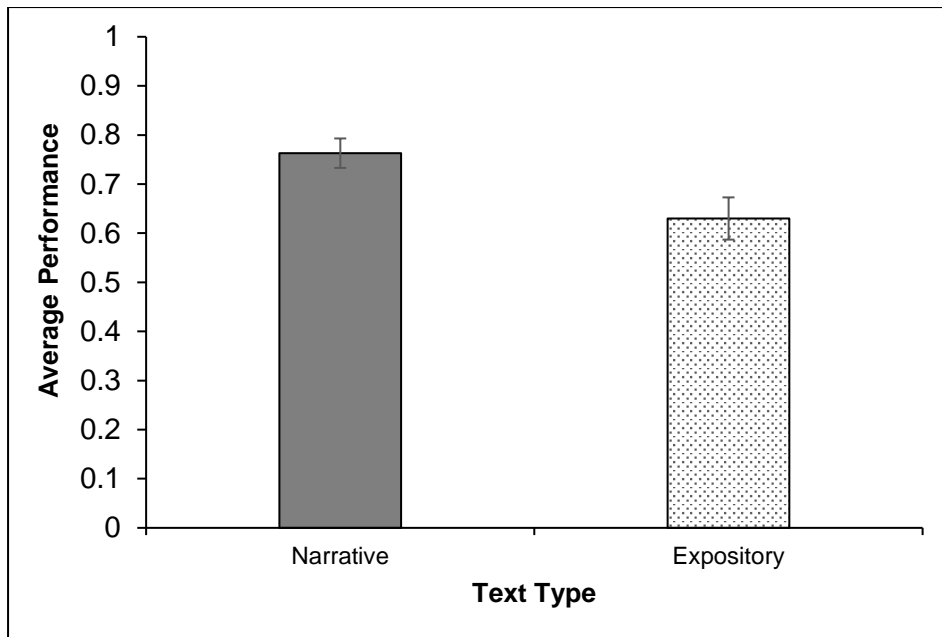


Figure 1. Effect of text type on average performance.

Discussion

The aim of the present study was to determine in what way the selected medium influences the reading comprehension of L2 English speakers for narrative and exploratory texts, compared to the reading comprehension in L1. Based on earlier research, we hypothesised that reading comprehension would be worse with expository texts in L2 than in L1 when reading from a screen, but less so when reading from paper. The hypothesis was not confirmed by our data. Text type was the only significant main effect, and no two-way or three-way interactions were found. In earlier research by Mangen et al. (2013), reading comprehension was impacted negatively by digital texts in comparison to texts on paper when specifically using expository texts. In contrast, we have found that participants performed worse with expository texts than with narrative texts and their performance was not influenced by presentation media, and language did not show any significant interactions with it. This finding might have been caused by the difficulty of the text type. Expository texts are characterised by their dense information structure in comparison to narrative texts, which usually focus more on dialogue and storytelling. The reading material and questions seemed to be of appropriate level, and university English bachelor students can be expected to have well-developed L1 and L2 reading skills. Nevertheless, it might have been more difficult for students to extract information from the expository texts due to their features. Another possible explanation for this could be that the expository texts had more challenging questions.

It is worth mentioning that there are other ways to explain the findings. Chen et al. (2014) already noted that familiarity with the platform plays a role on deep level comprehension. Chen et al. used tablets instead of desktop pcs, but the finding is equally applicable here. Most participants mentioned they read digitally more often on a daily basis. Of course, university students are expected to have high familiarity with computers and other

digital media as a newer generation in this digital age. The reason why no effect was found with presentation medium might have been that users were already used to reading texts on a screen, thus reducing the negative effects on comprehension.

The three-way interaction between language, text type, and medium showed a pattern with reversed symmetrical interactions between text type and medium which changed depending on the language condition, but the findings were not statistically significant. This can be attributed to the small participant pool, but also to the number of texts per condition. Participants received one text per condition, resulting in four texts total. Perhaps this finding could be replicated with significance with a larger participant pool and a larger selection of texts. Another way to explain these findings is the differences between how reading span and reading comprehension are measured. When comparing reading span to reading comprehension, Apltakin and Erçetin (2010) found that reading span decreased in L2 in comparison to L1. This might mean that reading span (which is closely related to working memory capacity) and reading comprehension are not influenced in the same manner. This is likely in part due to the difference in task design, but also because reading span tasks tap into working memory almost exclusively, while comprehension tasks can be argued to also task short-term memory due to the different task length and the analysis required to answer comprehension questions. Reading span tests also have a more consistent test setup in comparison to reading comprehension tests, as variance is introduced by both the texts as well as the questions.

However, there are a few caveats of this study which must be kept in mind. The most notable limitation is the aforementioned small sample size in comparison to earlier studies. This limitation is further emphasised due to using only one text per participant per category. Another unintended limitation was the requirement of participants to continually switch between two different media when the texts were presented on paper. This prevented

participants from comparing the texts and questions side-by-side, something which was observed to be frequently done by participants who received the texts digitally. This is a prototypical example of the split-attention principle, which dictates that when two sources of related information are not in close proximity for reading, it causes increased extraneous cognitive load (Yeung et al, 1996). The participants who received the texts digitally could take advantage of split windows for the user interface to minimise the effect of switching and interaction, and in effect, reduce cognitive load. While using the same medium for testing the participants may have ensured consistency, the unintended side-effect was also increasing the cognitive load for participants who read the texts on paper. Chen et al. (2014) also hypothesised that the switch between text media in their study may have resulted in increased cognitive load. This is in line with the findings of Chen et al. and Noyes and Garland (2008) on familiarity and interaction with digital texts. The low degree of required interaction might explain the mixed findings when comparing performance with digital texts and texts on paper. Nevertheless, the change in structure remains, as participants are unable to physically interact with the text, and are required to scroll through pages rather than flip them or display them side by side. This ensures that a certain degree of extraneous cognitive load still remains. On a related note, one participant claimed to have trouble during the experiment because her glasses were not intended for reading on a screen, though she used the glasses for reading on paper, resulting in an unintended handicap. Thankfully, this unfortunate problem was not raised by other participants, and the score of the participant did not deviate significantly from other participants.

A more complicated methodical issue is the usage of translated texts. Ensuring that the fidelity (i.e. closeness to the source material) and transparency (i.e. the conformity to the standards of the target language) are both kept high is a challenging task for even the most skilled translators. Furthermore, the concept of a 'good' translation is a vast and complicated

subject in the area of translation science which has been continually adapting over time (House, 2001; House, 2014). This subject is beyond the scope of this study, but it is still relevant to point out that the usage of translated texts, especially by use of machine-assisted translation, will most certainly have had an effect on the interpretation of the texts of the participants. Translations can hardly be considered a one-to-one alternative of source texts. Because of this, the testing and selected answers most likely were influenced as well. It is even debatable whether translated texts introduce less variance than other specifically selected texts, though this argument holds less strength with a smaller selection of texts. Therefore, while questions were carefully checked for any mismatch between possible answers and the (translated) texts, participants may have performed worse with certain L1 texts due to this complication.

Conclusion

In short, the results of this study indicate that no significant differences in performance for reading comprehension using texts on paper or on screen between readers of L1 (Dutch) and L2 (English) texts were found. Students performed better overall with narrative texts than with expository texts, but no interactions were found between text type, medium, and language. Furthermore, the number of errors (and also the amount of cognitive load) was inconsistent. The results do not give a conclusive answer on the effect of medium and language on cognitive load. Future research should attempt to further investigate cognitive load for these specific contexts by using larger sample sizes, multiples of the same text type for testing categories, and by use of a randomised selection of similar texts across text types. The way in which texts are shown on screen and to what degree participants are allowed to interact with it should also be kept in mind carefully. Other measurements should be considered for research on this subject as well, like reading speed, reading span, short-term memory retention, and long-term memory retention. Finally, it is recommended that the required degree of interaction and presentation of texts is carefully considered beforehand, as cognitive load may be affected in an unintended manner by the design of the study.

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Appendix A: Selected Texts**Text A: Groomed for TV****Martyn Harris looks back on his experience of being trained to appear on TV.**

I am terrible on TV. I slouch, sneer, stammer, fidget, forget my lines and swallow the ends of my words. It rankles, because I know inside I am scintillating, sensitive and sincere. Television can make any fool look like an intellectual. Newsreaders can contrive to look nice and even the worst presenters can seem sensible, but I come over as a shifty subversive. The single television programme I have presented was so awful that even my mother couldn't find a good word for it. After a catastrophic radio show last year, when I addressed the interviewer by the wrong name throughout, I swore I'd never do broadcasting again.

Until now, that is. I have my first novel out next month, which is called *Do It Again*, and the PR people inform me you just have to get out there and promote it. Scotland one day, the south coast of England the next. It's going to be hectic and I have to get my act together. Which is how I find myself being scrutinised for televisual potential by two svelte creatures from Public Image Ltd, while cameraman Alastair focuses on my trembling upper lip. Public Image is the outfit which has been teaching MPs how to look good on TV. They also groom executives from major companies in everything from corporate presentations to handling broadcast interrogation, but as far as I'm concerned, if they can make politicians look like real people, they are good enough for me.

'He blinks a lot, doesn't he?' says Diana, the speech specialist, studying my image on a video monitor. 'And the crossed legs look defensive. But the voice isn't bad.' Jeannie, who is introduced to me as Public Image's 'charisma consultant', takes a step backwards to study the general posture. 'Needs to get his bottom back in the sofa. And the jacket makes him look a bit deformed. Where does he get his clothes from?'

'Honesty is the most important thing,' says Diana. 'We don't want to turn people into actors. We want to bring out the personality. And of course speech is most important too. Lots of politicians don't breathe properly, so they have to shout. They give themselves sore throats and polyps on the vocal chords. Breathe from the diaphragm and you can speak quite loudly and for quite a long time without strain. Then most importantly, there are the three E's: Energy, Enthusiasm and Enjoyment. And do try to stop blinking.'

And so, as I breathe from the diaphragm, clench my eyelids apart and desperately try to project honesty as well as the three Es at once, the camera rolls. 'Today we are visiting the home of Martyn Harris,' says Diana dishonestly, 'a journalist who has recently published his first novel *Do It Again*. So, what can you tell us about the plot, Martyn?' 'Umm ...' A long pause. 'Errr ...' A longer pause. 'Tee hee, hargh ...' An asinine giggle. 'All right Alastair,' says Diana patiently, 'we'll try that again.'

We try it again, many, many times, each time chipping away at another tic and mannerism and gaucherie. On the second run-through, my crossed legs keep bobbing up and down, which makes me look as if I want to run away (I do, I do). On the third run they are uncrossed, but my hands are clenched in my lap. On the fourth I have wrenched my hands from my lap, but now they are fiddling with my ears. On the fifth, I'm throwing away the

ends of my sentences, which sounds as if I think my audience is thick (I don't really).

Television does curious things to your face, dragging it towards the edges of the screen. If you have a long face, as I have, it makes you look like a cadaverous mule. It emphasises the darkness of lipstick and eyeshadow, so make-up should be minimal, and used mainly to soften facial shadows. Does Diana think it is wicked, I wonder, to mould politicians in this way? 'As soon as anyone gets on telly these days, we expect them to be as good as the professionals, because that's where we get our standards from. It's unfair, but that's the way of the world. As for the ethics, I leave that to others and get on with my job.'

And it's a job she does very well, because on the final run-through, after three hours or so, I really don't look too bad. Steady gaze, breathing from the diaphragm, no twitches, no blinking. Not a consummate professional in the business, but not bad.

I'm brimming with honesty, energy, enthusiasm and enjoyment and I'm talking a lot of twaddle, but you'd hardly notice. When you watch politicians on TV, you'll see a lot more just like me.

Source: http://englishtests.ucoz.com/CAE/test1/reading/cae_paper1_test1_reading_part3.htm

Text B: HOME COMFORT

It was a lazy Sunday afternoon, the lull before the storm of Monday morning madness of alarm clocks, traffic jams and deadlines. The clock struck three and Rebecca's elbow still rested on the arm of the tapestry-covered sofa. With her fingertips she began caressing the rough piping that ran along its seams. Simultaneously, the toes of her left foot moved back and forth across the edges of the sheepskin rug. This action Rebecca found comforting; it reminded her of being at home as a child when she used to sit in the family sitting room, her toes playing with the fringes of another kind of rug. Her mother would snap at her to stop it, so of course she did it all the more.

Rebecca had a sudden whiff of the glue that Katy was applying to make one of her artistic creations. Her daughter was seated on a cushion right in the middle of the room, looking like an island, surrounded by a sea of cardboard cut-offs, sequins, felt-tip pens, and pristine sheets of white A4 paper that she had disobediently pinched from her father's study. She really should be working at the kitchen table, Rebecca thought, but I don't have the appetite for the outburst that might happen if my genius-daughter-at-work is disturbed. Every three minutes and 50 seconds Katy got up to replay Kylie Minogue's version of 'The Locomotion'.

"Why don't you listen to the CD all the way through, Katy?" her dad said, who was sprawled out on the other sofa. "You'd like the other songs as well."

"Nah, too boring."

Rebecca glanced at David and then said, "I could do with something to perk me up." Her words trailed off with a heavy sigh, and then a yawn. It was the first in a series of hints that she would like him to get up and make her a cup of tea.

On the lamp table next to the sofa, she noticed a letter that had been delivered a week ago, advertising exercises classes and a slimming club. She had kept it on the table as a reminder, or perhaps to conjure up the same kind of magical effect that people believe in when they splash out on membership to a fancy gym without going near the place more than once every two months.

"Have you seen this flyer?" she said to her husband. "Just the thought of going for a workout makes me want to go and lie down." Once more she didn't get a response. "Who's going to make the tea then?" was her third and most blatant attempt to get a drink before she died of thirst.

He stood up. "I suppose it's my turn. Again." He went off into the kitchen while Rebecca, the victor, snuggled a bit further into the sofa. Charlie, who'd been asleep on the sheepskin rug, now started up with his own brand of baby chatter. He was attempting to cover the whole repertoire of vowel sounds this afternoon, like a singer performing warm-up exercises. Then, occasionally, he jammed his fingers into his mouth to make a sound approaching an elongated 'w'.

He lay underneath a baby gym, which consisted of a tubular frame in patriotic colours of red, white and blue and a top bar, from which dangled two clowns, one on a swing and one in a position that Rebecca thought was called a pike. (It was a long time ago that she had achieved

her gold star award in the trampoline.) Once Charlie made eye contact with Rebecca, his happy babbling began to turn into a grizzle.

Does Charlie want feeding again?” Rebecca asked in the baby voice that irritated them all, herself included. She bent down to scoop her son up.

“Mum, he doesn’t want feeding again. You’ve only just fed him,” Katy said.

“I’ll try – just in case he’s hungry.” In the kitchen she warmed through the mush of potatoes and broccoli that Charlie liked and took it back through to be with Katy.

Luckily, the baby was actually ready for a feed, which meant that Rebecca not only saved face with her daughter, but showed that she had no need to feel guilty about sending her husband to make the tea. David walked back in the sitting room that very minute, her cup of Earl Grey with its delicate scent of bergamot wobbling in its saucer. In his other hand he clutched a large mug. Rebecca gave him a warning look that dared him not to put the cups down on the oak blanket box that served as their coffee table. Its surface was already scarred by two rings where hot drinks had been carelessly placed directly onto it.

“Thanks. You’re a treasure.” She settled down to feed Charlie, knowing that her tea would be the perfect temperature to drink in one go by the time he had had enough.

“Where’s Katy got to?” David said, after a few minutes. The answer came from upstairs as they heard the sound of their older child passing through the curtain in the doorway of her bedroom. It was like those beaded curtains that used to be in fashion when Rebecca was a child, but instead of beads this one was formed from a dazzling collection of pink, purple and silver shimmering plastic squares. She couldn’t remember which one of them had named it the ‘jingle-jangler’ but it was very apt.

Source: <http://www.flo-joe.co.uk/cae/students/tests/1part3.htm>

Tekst A: Klaargestoomd voor TV

Martyn Harris kijkt terug op zijn ervaringen met getraind worden om op TV te verschijnen.

Ik ben verschrikkelijk op TV. Ik ben altijd aan het slungelen, grijnzen, stamelen, wriemelen, ik vergeet mijn tekst en ik spreek niet alle woorden volledig uit. Het knaagt aan me, want ik weet dat ik vanbinnen een stralend, gevoelig en oprecht individu ben. Televisie kan iedere dwaas intellectueel laten lijken. Nieuwslezers kunnen verzinsels bedenken om beter te lijken en zelfs de slechtste presentators kunnen verstandig lijken, maar ik kom desalniettemin over als een onbetrouwbaar, subversief individu. Het enige televisieprogramma waar ik als presentator aan mee heb gewerkt was zo verschrikkelijk slecht dat zelfs mijn moeder niet de goede woorden ervoor kon vinden. Na de catastrofale radioshow vorig jaar, toen ik de interviewer door het gehele interview met de verkeerde naam aansprak, zwoer ik nooit meer als presentator te gaan werken.

Tenminste, tot nu toe. Mijn eerste roman, *Do It Again*, komt de volgende maand uit, en de PR mensen informeren me dat je er gewoon tevoorschijn moet komen en het moet promoten. Schotland op één dag, de zuidkust van Engeland de volgende dag. Het wordt hectisch en ik moet mijn schouders eronder zetten ervoor. En zo vind ik mezelf dus voor het televisiepotentieel bekritiseerd worden door twee slanke figuren van Public Image Ltd., terwijl de cameraman Alastair zich richt op mijn trillende bovenlip. Public Image is de organisatie die parlementariërs heeft geleerd hoe ze er goed uit kunnen zien op tv. Zij stomen ook leidinggevenden van grote bedrijven klaar om alle verwachte trucjes te kunnen, van bedrijfspresentaties tot het behandelen van uitzendondervragingen, maar wat mij betreft, als ze politici als echte mensen kunnen laten lijken, zijn ze goed genoeg voor mij.

“Hij knippert wel veel zeg,” Zegt Diana, de spraakspecialist, die mij op een videomonitor studeert. “En de gekruiste benen ogen wat verdedigend. Maar de stem is niet slecht.” Jeannie, die tegenover mij geïntroduceerd werd als de Public Image *charisma consultant*, neemt een stap achteruit om mijn algemene houding te bestuderen. “Hij moet zijn billen terug in de bank zetten. En de jas maakt hem een beetje misvormd. Waar haalt hij zijn kleren vandaan?”

“Eerlijkheid is het belangrijkste,” zegt Diana. “We willen mensen niet in acteurs veranderen. We willen de persoonlijkheid van mensen naar buiten brengen. En natuurlijk is spraak ook het belangrijkste. Veel politici ademen niet goed, dus moeten ze schreeuwen. Ze krijgen erdoor een zere keel en poliepen op de stembanden. Adem vanuit het diafragma en je kan vrij luid en vrij lang spreken zonder spanning. Nog belangrijker zijn er de drie E's: *Enthusiasm*, *Energy* en *Enjoyment*. En probeer echt te stoppen met knippen.”

En dus, als ik vanuit mijn diafragma adem, mijn ogen wijd open houd en wanhopig probeer om eerlijkheid en de drie Es tegelijkertijd uit te stralen, beginnen de camera's met draaien. “Vandaag bezoeken we het huis van Martyn Harris,” zegt Diana onoprecht “, een journalist die onlangs zijn eerste roman, *Do It Again*, heeft gepubliceerd. Dus, wat kun je ons vertellen over het verhaal, Martyn?” “Umm ...” Een lange aarzeling. “Uhhhh ...” Een nog langere aarzeling. “Hihi, hmm...” Een nerveus lachje. “Oké, Alastair,” zegt Diana geduldig, “we gaan het even opnieuw proberen.”

We proberen het opnieuw, en opnieuw, en opnieuw, elke keer met kritiek om een andere tic, stukje manie of onhandigheid weg te halen. Bij de tweede poging blijven mijn gekruiste benen op en neer gaan, waardoor het eruit ziet alsof ik weg wil lopen (en niets liever zou ik willen). Met de derde ronde zijn mijn benen inmiddels losgeknipt, maar in plaats daarvan zijn mijn handen op mijn schoot vastgeklemd. Met de vierde poging heb ik mijn handen van mijn schoot weg weten te wrongen, maar nu ben ik met mijn oren aan het wriemelen. Met de vijfde poging laat ik de laatste woorden van mijn zinnen weg, waardoor klinkt alsof ik denk dat mijn publiek dom is (echt, ik vind van niet).

Televisie doet eigenaardige dingen met je gezicht en sleept het naar de randen van het scherm. Als je een lang gezicht hebt, zoals ik, lijkt je eruit te zien als een lijkkleurige muilezel. Het accentueert de donkerheid van de lippenstift en de oogschaduw, wat betekent dat de make-up minimaal moet zijn en vooral gebruikt moet worden om gezichtsschaduwen te verzachten. Denkt Diana dat het slecht is, vraag ik me af, om politici zo te vormen? “Zodra iemand vandaag op televisie komt, verwachten we dat ze zo goed zijn als de professionals, want dat is waar we onze standaarden vandaan krijgen. Het is oneerlijk, maar dat is hoe het in de wereld te werk gaat. Wat de ethiek betreft, ik laat dat aan anderen over en ga gewoon met mijn baan verder.”

En het is een baan die ze heel goed doet, want met de laatste poging, na ongeveer drie uur, zie ik er niet zo slecht uit eigenlijk. Vaste blik, ademhaling vanuit het diafragma, geen willekeurige spasmes, en geen knippen. Niet een volmaakte professional van deze wereld, maar over het algemeen niet slecht.

Ik ben vol met eerlijkheid, energie, enthousiasme en plezier en ik klets onzin aan één stuk door, maar je zult het nauwelijks opmerken. Als je naar politici op tv kijkt, zie je veel meer gevallen zoals ik.

Tekst B: Thuiscomfort

Het was een luie zondagmiddag, de stilte voor de storm van de maandagochtendwaanzen van wekkers, files en deadlines. De klok sloeg drie en Rebecca's elleboog rustte nog op de armleuning van de met tapijt bedekte bank. Met haar vingertoppen begon ze de ruwe draden die langs de naden liepen te strelen. Tegelijkertijd ging ze met haar tenen van haar linkervoet heen en weer over de randen van het schapenvacht. Deze handeling stelde Rebecca gerust; Het herinnerde haar dat ze als een kind toen ze vroeger thuis in de gezinskamer zat met haar tenen speelde met de randjes van een ander soort tapijt. Haar moeder zou zeuren om te stoppen, en dat gaf haar natuurlijk des te meer reden om door te gaan.

Rebecca kon plotseling een vleugje van de lucht opsnuiven van de lijm die Katy gebruikte om een van haar artistieke creaties te maken. Haar dochter zat op een kussen in het midden van de kamer, de ruimte lijkend op een eiland omringd door een zee van kartonsnippers, pailletten, viltpenen en gloednieuwe vellen van wit A4-papier die ze stiekem van werkkamer van haar vader had gestolen. Ze zou echt aan de keukentafel moeten werken, dacht Rebecca, maar ik heb geen behoefte aan de driftbui die zou kunnen ontstaan als mijn 'geniale' knutselende dochter zou worden gestoord met haar werkje. Om de drie minuten en 50 seconden stond Katy op om de Kylie Minogue's versie van *'The Locomotion'* opnieuw op te zetten.

“Waarom luister je niet helemaal naar de cd, Katy?” Zei haar vader, die languit op de andere bank lag. “Je zou de andere liedjes ook wel leuk vinden.”

“Nee, te saai.”

Rebecca keek op naar David en zei toen: “Ik zou wel iets willen hebben dat me een beetje kan opkikkeren.” Haar woorden eindigden met een lange zucht, en dan een gaap. Het was de eerste in een reeks hints dat ze zou willen dat hij zou opstaan om voor haar een kopje thee te maken.

Op de lamptafel naast de bank zag ze een brief die een week geleden geleverd was die adverteerde over fitness trainingen en een afslankclub. Ze had het op de tafel neergezet als een herinnering of misschien om voor haar hetzelfde soort magisch effect tevoorschijn te toveren dat mensen krijgen wanneer ze zich voor een lidmaatschap voor een nieuwe sportschool inschrijven zonder uiteindelijk meer dan een keer per twee maanden te gaan.

“Heb je deze flyer gezien?” Zei ze tegen haar man. “Alleen de gedachte om te gaan trainen zorgt ervoor dat ik wil gaan liggen.” Nogmaals kreeg ze geen antwoord. “Wie gaat dan de thee maken?” Was haar derde en meest schaamteloze poging om wat te drinken te krijgen voordat ze stierf van de dorst.

Hij stond op. “Ik zie dat het mijn beurt is. Opnieuw.” Hij ging naar de keuken, terwijl Rebecca, de overwinnaar, een beetje verder in de bank nestelde. Charlie, die op het tapijt van schapenwol was gaan slapen, begon nu met zijn eigen vorm van baby brabbel. Hij probeerde vanmiddag het hele repertoire van klinkers te dekken, zoals een zanger die een warming-up doet voor het zingen. Daarna stak hij af en toe zijn vingers in zijn mond om een geluid te maken dat leek op een verlengde 'w'.

Hij lag onder een baby gym, die bestond uit een buisvormig raamwerk in patriottische kleuren van rood, wit en blauw en een staaf bovenaan waaraan twee clowns hingen, één op een schommel en één hing in een positie waarvan Rebecca meende te herinneren dat het de snoek positie werd genoemd (Het was alweer lang geleden dat ze haar gouden medaille had gekregen die ze voor het trampolinespringen had behaald.) Toen Charlie oogcontact had gemaakt met Rebecca, begon zijn gelukkige gebrabbel in een grijns te veranderen.

“Wil Charlie opnieuw hapje eten?” Vroeg Rebecca in de babyspraak waaraan ze zich allemaal ergerden, inclusief zichzelf. Ze leunde naar beneden om haar zoon op te pakken.

“Mama, hij wil niet weer eten. Je hebt hem pas nog wat gegeven,” zei Katy.

“Ik ga het toch proberen, voor het geval dat hij honger heeft.” In de keuken verwarmde ze de prak aan aardappelen en broccoli die Charlie lekker vond en nam het mee in de ruimte waar Katy zat.

Gelukkig was de baby toch klaar om te eten, wat ervoor zorgde dat Rebecca niet alleen in aanzien bleef staan bij haar dochter, maar ook liet zien dat ze zich niet schuldig hoefde te voelen om haar man te hebben gestuurd om de thee te maken. David liep precies die minuut terug de zitkamer in met een kop Earl Grey die zijn verrukkelijke geur van bergamot vrijliet vanuit het schoteltje. In zijn andere hand droeg hij een grote mok. Rebecca gaf hem een waarschuwend kijk die signaleerde om de bekers niet op de eiken dekendoos te zetten die als koffietafel diende. Het oppervlak was al door twee ringen geschaad waar de warme dranken onzorgvuldig geplaatst waren.

"Bedankt. Je bent een schat." Ze streek neer om Charlie te voeden, wetend dat haar thee de perfecte temperatuur zou hebben bereikt om één keer te drinken nadat hij genoeg had gehad.

'Waar is Katy opeens naartoe?'" Zei David na een paar minuten. Het antwoord kwam van bovenaf, omdat ze het geluid van hun oudere kind door het gordijn in de deuropening van haar slaapkamer hoorden. Het leek enigszins op die kraalgordijnen die in de mode waren toen Rebecca een kind was, maar in plaats van kralen was deze gemaakt van een schitterende verzameling van roze, paarse en zilveren glimmende plastic vierkantjes. Ze kon zich niet herinneren wie van hen het een 'rinkel-klinkeler' had genoemd, maar de naam was erg passend.

Text C: Introduction to a book about the history of colour

This book examines how the ever-changing role of colour in society has been reflected in manuscripts, stained glass, clothing, painting and popular culture. Colour is a natural phenomenon, of course, but it is also a complex cultural construct that resists generalization and, indeed, analysis itself. No doubt this is why serious works devoted to colour are rare, and rarer still are those that aim to study it in historical context. Many authors search for the universal or archetypal truths they imagine reside in colour, but for the historian, such truths do not exist. Colour is first and foremost a social phenomenon. There is no transcultural truth to colour perception, despite what many books based on poorly grasped neurobiology or – even worse – on pseudoesoteric pop psychology would have us believe. Such books unfortunately clutter the bibliography on the subject, and even do it harm.

The silence of historians on the subject of colour, or more particularly their difficulty in conceiving colour as a subject separate from other historical phenomena, is the result of three different sets of problems. The first concerns documentation and preservation. We see the colours transmitted to us by the past as time has altered them and not as they were originally. Moreover, we see them under light conditions that often are entirely different from those known by past societies. And finally, over the decades we have developed the habit of looking at objects from the past in black-and-white photographs and, despite the current diffusion of colour photography, our ways of thinking about and reacting to these objects seem to have remained more or less black and white.

The second set of problems concerns methodology. As soon as the historian seeks to study colour, he must grapple with a host of factors all at once: physics, chemistry, materials, and techniques of production, as well as iconography, ideology, and the symbolic meanings that colours convey. How to make sense of all of these elements? How can one establish an analytical model facilitating the study of images and coloured objects? No researcher, no method, has yet been able to resolve these problems, because among the numerous facts pertaining to colour, a researcher tends to select those facts that support his study and to conveniently forget those that contradict it. This is clearly a poor way to conduct research. And it is made worse by the temptation to apply to the objects and images of a given historical period information found in texts of that period. The proper method – at least in the first phase of analysis – is to proceed as do palaeontologists (who must study cave paintings without the aid of texts): by extrapolating from the images and the objects themselves a logic and a system based on various concrete factors such as the rate of occurrence of particular objects and motifs, their distribution and disposition. In short, one undertakes the internal structural analysis with which any study of an image or coloured object should begin.

The third set of problems is philosophical: it is wrong to project our own conceptions and definitions of colour onto the images, objects and monuments of past centuries. Our judgements and values are not those of previous societies (and no doubt they will change again in the future). For the writer-historian looking at the definitions and taxonomy of colour, the danger of anachronism is very real. For example, the spectrum with its natural order of colours was unknown before the seventeenth century, while the notion of primary and secondary colours did not become common until the nineteenth century. These are not eternal notions but stages in the ever-changing history of knowledge.

I have reflected on such issues at greater length in my previous work, so while the present book does address certain of them, for the most part it is devoted to other topics. Nor is it concerned only with the history of colour in images and artworks – in any case that area still has many gaps to be filled. Rather, the aim of this book is to examine all kinds of objects in order to consider the different facets of the history of colour and to show how far beyond the artistic sphere this history reaches. The history of painting is one thing; that of colour is another, much larger, question. Most studies devoted to the history of colour err in considering only the pictorial, artistic or scientific realms. But the lessons to be learned from colour and its real interest lie elsewhere.

Source: <http://www.flo-joe.co.uk/cae/students/tests/CAE-Part-5-Multiple-Choice-Practice-Test.htm>

Text D: the internet today

James Baxter reviews two books about the internet: *Rewire* by Ethan Zuckerman, and *Untangling the Web* by Aleks Krotoski.

Open a street map of any city and you see a diagram of all the possible routes one could take in traversing or exploring it. Superimpose on the street map the actual traffic flows that are observed and you see quite a different city: one of flows. The flows show how people actually travel in the city, as distinct from how they could. This helps in thinking about the internet and digital technology generally. In itself, the technology has vast possibilities, as several recent books emphasise, but what we actually wind up doing with it is, at any point in time, largely unknown.

Ethan Zuckerman is excited by the possibilities the web provides for linking far-flung populations, for sampling different ways of life, for making us all digital cosmopolitans. His central thesis, however, is that while the internet does, in principle, enable everyone to become genuinely cosmopolitan, in practice it does nothing of the kind. As the philosopher Anthony Appiah puts it, true cosmopolitanism ‘challenges us to embrace what is rich, productive and creative’ about differences; in other words, to go beyond merely being tolerant of those who are different. Much of the early part of *Rewire* is taken up with demonstrating the extent to which the internet, and our use of it, fails that test. *[line 13]*

‘We shape our tools,’ said the philosopher Marshall McLuhan, ‘and afterwards they shape us.’ This adage is corroborated every time most of us go online. We’ve built information tools (like search and social networking systems) that embody our biases towards things that affect those who are closest to us. They give us the information we think we want, but not necessarily the information we might need.

Despite all the connectivity, we are probably as ignorant about other societies as we were when television and newspapers were our main information sources. In fact, Zuckerman argues, in some ways we were better then, because serious mainstream media outlets saw it as their professional duty to ‘curate’ the flow of news; there were editorial gatekeepers who determined a ‘news agenda’ of what was and wasn’t important. But, as the internet went mainstream, we switched from curation to search, and the traditional gatekeepers became less powerful. In some respects, this was good because it weakened large multimedia conglomerates, but it had the unanticipated consequence of increasing the power of digital search tools – and, indirectly, the power of the corporations providing them.

Zuckerman – a true cosmopolitan who co-founded a web service dedicated to realising the net’s capacity to enable anyone’s voice to be heard – provides an instructive contrast to excessively optimistic narratives about the transformative power of networked technology, and a powerful diagnosis of what’s wrong. Where he runs out of steam somewhat is in contemplating possible solutions, of which he identifies three: ‘transparent translation’ – simply automated, accurate translation between all languages; ‘bridge figures’ – bloggers who explain ideas from one culture to another; and ‘engineered serendipity’ – basically, technology for enabling us to

escape from filters that limit search and networking systems. Eventually, the technology will deliver transparent translation; cloning Ethan Zuckerman would provide a supply of bridge figures, but, for now, we will have to make do with pale imitations. Engineering serendipity, however, is a tougher proposition.

Aleks Krotoski might be able to help. She is a keen observer of our information ecosystem, and has been doing the conference rounds with an intriguing contraption called the ‘Serendipity Engine’, which is two parts art [*line 36*] installation and one part teaching tool. *Untangling the Web* is a collection of 17 thoughtful essays on the impact of comprehensive networking on our lives. They cover the spectrum of stuff we need to think about – from the obvious [*line 38*] (like privacy, identity and the social impact of the net) to topics which don’t receive enough attention (for example, what medics, with a sniff, call ‘cyberchondria’ – how the net can increase health anxieties). [*line 40*]

Although she’s a glamorous media ‘star’ (having fronted a TV series about the internet), people underestimate Krotoski at their peril. She’s a rare combination of academic, geek, reporter and essayist, which her chapter on the concept of friendship online exemplifies: she’s read what the key social theorists say on the subject, but she’s also alert to what she experiences as ‘emotional anaemia’ – ‘the sense that.....you might not feel the online love from the people you should, because your nearest and dearest may be drowned out in the ocean of sociability.’ Which, in a way, brings us back to Zuckerman’s thoughts about the difference between what networked technology could do and what it actually does.

Source: <http://todayschool.es/advanced-cae-online-tests/>

Tekst C: Introductie tot een boek over de geschiedenis van kleur

In dit boek wordt onderzocht hoe de steeds veranderende rol van kleur in de samenleving weerspiegeld is in manuscripten, glas-in-lood, kleding, schilderkunst en popcultuur. Kleur is uiteraard een natuurlijk fenomeen, maar het is ook een complexe culturele constructie dat weerstand biedt tegen generalisaties en analyse zelf. Er is geen twijfel dat dit de reden is dat serieuze werken die aan kleur worden geweid, zeldzaam zijn, en nog zeldzamer zijn degene die ernaar streven om het in de historische context te bestuderen. Veel auteurs zoeken naar de universele of archetypische waarheden die zich naar hun idee voordoen in kleur, maar voor de historicus bestaan dergelijke waarheden niet. Kleur is ten eerste en ten voornaamste een sociaal fenomeen. Er is geen transculturele waarheid over de kleurperceptie, ondanks wat veel boeken gebaseerd op slecht vastgelegde neurobiologie of - nog erger - op pseudo-esoterische poppsychologie zouden beweren. Dergelijke boeken verstoppen helaas de bibliografie over dit onderwerp en doen het zelfs schade aan.

De stilte van historici over het onderwerp kleur, of meer in het bijzonder hun moeilijkheden om kleur te begrijpen als een onderwerp dat los staat van andere historische fenomenen, is het resultaat van drie verschillende sets problemen. De eerste betreft documentatie en behoud. We zien de kleuren die doorgegeven naar ons zijn door het verleden naarmate tijd ze aangetast heeft, en niet zoals deze kleuren oorspronkelijk waren. Bovendien zien we ze onder belichtingsomstandigheden die vaak heel anders zijn dan die van samenlevingen uit het verleden. En tot slot hebben we in de decennia de gewoonte ontwikkeld om voorwerpen uit het verleden in zwart-witfoto's te bekijken en, ondanks de huidige verspreiding van kleurenfotografie, lijkt onze manier van denken over en de reactie op deze voorwerpen min of meer zwart-wit gebleven te zijn.

De tweede reeks problemen betreft methodologie. Zodra de historicus kleur wil bestuderen, moet hij meteen tegelijkertijd met allerlei factoren worstelen: fysica, chemie, materialen en productietechnieken, evenals iconografie, ideologie en de symbolische betekenissen die kleuren overbrengen. Hoe kan je al deze elementen doorgronden? Hoe kan men een analytisch model opstellen dat de studie van beelden en gekleurde objecten vergemakkelijkt? Geen onderzoeker, geen methode, is nog in staat om deze problemen op te lossen, omdat een onderzoeker onder de talrijke feiten in verband met kleur de feiten selecteert die zijn studie ondersteunen en diegene die tegenstrijdig zijn, gemakkelijk vergeet. Dit is duidelijk een slechte manier om onderzoek te doen. En het wordt verergerd door de verleiding om de informatie die in teksten van die periode wordt gevonden op de objecten en afbeeldingen van een gegeven historische periode. De juiste methode - althans in de eerste fase van de analyse - volgt zoals de werkwijze van paleontologen (die grotschilderingen zonder teksten dienen te bestuderen): door uit de beelden en objecten zelf een logica te extrapoleren en een systeem gebaseerd op verschillende concrete factoren, zoals het optredenpercentage van bepaalde objecten en motieven, hun distributie en dispositie. Kortom, er wordt een interne structurele analyse ondernomen waarmee elke studie van een beeld of een gekleurd object moet beginnen.

De derde set van problemen is filosofisch van aard: het is verkeerd om onze eigen opvattingen en definities van kleur te projecteren op de beelden, voorwerpen en monumenten van de afgelopen eeuwen. Onze oordelen en waarden zijn niet hetzelfde als die van de vorige samenlevingen (en zonder twijfel zullen ze in de toekomst weer veranderen). Voor de schrijver-historicus die de definities en taxonomie van kleur bekijkt, is het gevaar van

anachronisme zeer reëel. Het spectrum met zijn natuurlijke kleurorde was bijvoorbeeld onbekend voor de zeventiende eeuw, terwijl het begrip primaire en secundaire kleuren niet tot de negentiende eeuw algemeen bekend werd. Dit zijn geen eeuwige begrippen maar stappen in de steeds veranderende geschiedenis van kennis.

In mijn vorige werk heb ik zo'n kwestie in meer detail besproken, dus hoewel in het huidige boek er een aantal van hen aan de orde wordt gesteld, is het voornamelijk gewijd aan andere onderwerpen. Ook is het niet alleen bezig met de geschiedenis van de kleur in beelden en kunstwerken - dit gebied heeft in ieder geval nog steeds veel gaten die gevuld moeten worden. Het doel van dit boek is eerder om allerlei objecten te onderzoeken om de verschillende facetten van de geschiedenis van kleur te overwegen en te laten zien hoe ver buiten het artistieke gebied deze geschiedenis reikt. De geschiedenis van het schilderen is één ding; Die van kleur is een andere, veel grotere vraag. De meeste studies die gewijd zijn aan de geschiedenis van kleurverlies, beschouwen alleen de beeldende, artistieke of wetenschappelijke rijken. Maar de lessen die geleerd worden van kleur en zijn echte belangstelling liggen elders.

Tekst D: Het internet vandaag

James Baxter beoordeelt twee boeken over het internet: *Rewire*, door Ethan Zuckerman, en *Untangling the Web*, door Aleks Krotoski.

Open een straatkaart van welke stad dan ook en je zult een diagram zien van alle mogelijke routes die u al doorzoekend of verkennend zou kunnen nemen. Plaats bovenop de straatkaart de actuele verkeersstromen waargenomen en zie je een andere stad: een van stromingen. De stromen laten zien hoe mensen daadwerkelijk in de stad reizen, evenals hoe ze kunnen reizen. Dit helpt in het algemeen over internet en digitale technologie te denken. Op zichzelf heeft de technologie enorme mogelijkheden, zoals er in verscheidene recente boeken wordt benadrukt, maar wat we er eigenlijk mee doen, is, om welk moment van de dag het nou gaat, grotendeels onbekend.

Ethan Zuckerman is enthousiast over de mogelijkheden die het internet voorziet in het koppelen van versteekte populaties, voor het samplen van verschillende manieren van leven, om ons allen digitale kosmopolieten te maken. Zijn centrale thesis is echter dat hoewel het internet in principe iedereen in staat stelt echt kosmopolitisch te worden, in de praktijk doet het niets zoals dat. Zoals de filosoof Anthony Appiah het stelt, 'daagt het ware kosmopolitisme ons uit om dat wat rijk, productief en creatief te omarmen' over verschillen; Met andere woorden, verder gaan dan alleen tolerant zijn voor degenen die anders zijn. Veel van het vroege deel van *Rewire* omvat het aantonen van de mate waarin het internet en ons gebruik ervan die test niet doorstaat. [*Regel 13*]

'We geven onze gereedschappen vorm,' zei de filosoof Marshall McLuhan, 'en daarna geven ze ons vorm'. Dit gezegde wordt bevestigd elke keer dat de meeste mensen online gaan. We hebben informatieprogramma's opgebouwd (zoals zoek- en sociale netwerksystemen) die onze vooroordelen belichamen betreffende zaken die degenen die het dichtst bij ons staan beïnvloeden. Zij geven ons de informatie die we denken dat we willen, maar niet per se de informatie die we nodig hebben.

Ondanks alle connectiviteit zijn we waarschijnlijk zo onwetend over andere samenlevingen als toen televisie en kranten onze belangrijkste informatiebronnen waren. Sterker nog, Zuckerman beweert zelfs dat we op een of andere manier beter waren, omdat serieuze mainstream media-uitzendingen het als hun professionele plicht beschouwden om de stroom van nieuws te 'cureren'; Er waren redactionele poortwachters die een 'nieuwsagenda' vaststelden van wat wel en niet belangrijk was. Maar toen het internet 'mainstream' werd, veranderden we van curatie naar zoeken, en de traditionele poortwachters werden minder krachtig. In sommige opzichten was dit goed omdat het grote multimediakonglomeraten verzwakte, maar het had het onvoorziene gevolg van het vergroten van de kracht van digitale zoekgereedschappen - en indirect de macht van de bedrijven die hen leverden.

Zuckerman - een echte kosmopoliet die met anderen een webservice creëerde die zich inzet voor het realiseren van de capaciteit van het net om iedereen te kunnen horen - geeft een instructief contrast tegen overmatig optimistische verhalen over de transformatieve kracht van netwerktechnologie en een krachtige diagnose over wat er mis is. Waar hij enigszins zijn brandstof lijkt kwijt te raken, is het peinzen over mogelijke oplossingen, waarvan hij drie opnoemt: 'transparante vertaling' - eenvoudig geautomatiseerde, nauwkeurige vertaling tussen alle talen; 'Brug individuen' - bloggers die ideeën uit de ene cultuur voor een andere

uitleggen; En 'geconstrueerde serendipiteit' - in principe technologie die ons in staat stelt om te ontsnappen aan filters die zoek- en netwerksystemen beperken. Uiteindelijk zal de technologie transparante vertaling leveren; het clonen van Ethan Zuckerman zou een aanbod van brugfiguren bieden, maar voorlopig zullen we moeten doen met simpele imitaties. Geconstrueerde serendipiteit is echter een lastigere propositie.

Aleks Krotoski zou kunnen helpen. Ze is een scherp waarnemer van ons informatie-ecosysteem, en heeft de conferentie rondes gedaan met een intrigerend toestel die de 'Serendipity Engine' genoemd wordt, die twee delen kunstinstallatie *[regel 36]* en een deel onderwijsmiddel is. *Untangling the Web* is een verzameling van 17 doordachte essays over de impact van uitgebreide netwerken op ons leven. Zij behandelen het spectrum van dingen waarover we moeten nadenken - van de voor de hand liggende *[regel 38]* (zoals de privacy, de identiteit en de sociale impact van het net) tot onderwerpen die niet genoeg aandacht krijgen (bijvoorbeeld, wat dokters, met een snuif, Cyberchondria 'noemen- en hoe het net gezondheidsangst kan verhogen). *[Regel 40]*

Hoewel ze een glamoureuze media 'ster' is (met een tv-serie over het internet), onderschatten mensen Krotoski voor het gevaar waarin ze kunnen verkeren. Ze is een zeldzame combinatie van academicus, geek, verslaggever en essayist, wat haar hoofdstuk over het concept van vriendschap online illustreert: ze heeft gelezen wat de belangrijkste sociaal theoretici zeggen over dit onderwerp, maar ze is ook alert als het gaat om wat ze als 'emotionele anemie' ervaart - 'Het gevoel dat ... je misschien niet de online liefde voelt van de mensen waarvan je het zou moeten voelen, omdat de nabijste en meest geliefde in de oceaan van socialisering verdrinken kunnen worden.' Dat brengt ons op een manier terug naar Zuckerman's gedachten over het verschil tussen wat netwerktechnologie zou kunnen doen en wat het eigenlijk doet.

Appendix B: Questions Used with Selected Texts**A: Groomed for TV: questions**

- 13.** The writer believes that one reason he is terrible on TV is that
- A. he doesn't make enough effort to perform well.
 - B. he can't help being rude to interviewers.
 - C. his personality seems unappealing to viewers.
 - D. his personality differs from that of newsreaders and presenters.
- 14.** The writer has become involved with Public Image Ltd because
- A. he wants to find out what such companies do.
 - B. he has been told that it is in his interests to do so.
 - C. he is intrigued by the work they do for politicians.
 - D. he has been told that the company is good at promoting novels.
- 15.** Diana and Jeannie both say that one of the writer's problems when appearing on TV concerns
- A. the way he sits.
 - B. the clothes he wears.
 - C. the way his eyes move.
 - D. the way he moves.
- 16.** What does Diana tell the writer about politicians?
- A. They are usually reluctant to tell the truth.
 - B. They often fail to realise that they are shouting.
 - C. They are frequently nervous when they appear on TV.
 - D. They frequently speak in a way that is harmful to them.
- 17.** The writer believes that his response to Diana's first question sounds
- A. insincere.
 - B. silly.
 - C. rude.
 - D. predictable.
- 18.** When the writer asks Diana about her job, she
- A. says that she is only interested in doing it well.
 - B. admits that sometimes it results in people looking foolish.
 - C. says that it frequently involves frustrations.
 - D. agrees that it is hard to justify it.
- 19.** In the final paragraph, the writer concludes that
- A. he has underestimated how challenging appearing on TV can be for politicians.
 - B. he has learnt how to sound convincing without saying anything meaningful.
 - C. some people can be trained to do absolutely anything.
 - D. viewers are more perceptive than is generally believed.

Home comfort: questions

1 Rebecca's mood at the start of the story is

- A. calm and reflective.
- B. cross and irritable.
- C. restless and agitated.
- D. sad and upset.

2 What action does Rebecca take with her daughter?

- A. She reprimands Katy for making a mess on the floor.
- B. She asks David to speak to Katy.
- C. She appeals to Katy to play a wider range of music.
- D. She does nothing in order to avoid a fuss.

3 What is Rebecca's attitude to the letter lying on the table?

- A. The advert's claims are misleading.
- B. She hopes it will prompt her to take up exercise.
- C. It makes her feel more motivated.
- D. She thinks the slimming club is good value for money.

4 When David first leaves the sitting room, Rebecca is

- A. relieved that her baby is awake.
- B. surprised to hear her baby chattering.
- C. guilty that she's being lazy.
- D. glad to have got her own way.

5 Rebecca is worried when her husband brings in the drinks because

- A. he might trip over Katy's equipment.
- B. he doesn't like the smell of her tea.
- C. tea is dripping from the saucer.
- D. he might damage an item of furniture.

6 The curtain referred to in Katy's bedroom

- A. is identical in design to one from a previous generation.
- B. makes a tinkling sound.
- C. is made up of unusual colours.
- D. keeps out the light at night.

A: Klaargestoomd voor tv: vragen

- 13.** De schrijver is van mening dat een reden is dat hij verschrikkelijk is op tv omdat
- A. hij doet niet genoeg moeite om goed te presteren.
 - B. hij het niet kan laten om onbeleefd te zijn tegenover interviewers.
 - C. zijn persoonlijkheid onaangenaam lijkt voor kijkers.
 - D. zijn persoonlijkheid verschilt met die van nieuwslezers en presentators.
- 14.** De schrijver is betrokken bij Public Image Ltd omdat
- A. hij wil weten wat dergelijke bedrijven doen.
 - B. hij is verteld dat het in zijn belang ligt om dit te doen.
 - C. hij geïntrigeerd is door het werk dat zij voor politici doen.
 - D. aan hem verteld is dat het bedrijf goed is in zijn romans promoten.
- 15.** Diana en Jeannie zeggen dat dat een van de problemen van de schrijver wanneer ze op tv zijn gaat over
- A. de manier waarop hij zit
 - B. de kleding die hij draagt
 - C. de manier waarop zijn ogen bewegen
 - D. de manier waarop hij beweegt
- 16.** Wat vertelt Diana de schrijver over politici?
- A. Zij zijn meestal onwillig om de waarheid te vertellen.
 - B. Zij merken vaak niet dat ze schreeuwen.
 - C. Ze zijn vaak zenuwachtig als ze op tv verschijnen.
 - D. Ze spreken vaak op een manier die schadelijk is voor hen.
- 17.** Zijn reactie op Diana's eerste vraag klinkt volgens de schrijver
- A. Onoprecht.
 - B. dom.
 - C. onbeleefd.
 - D. voorspelbaar.
- 18.** Wanneer de schrijver Diana vragen stelt over haar werk...
- A. zegt ze dat ze alleen maar geïnteresseerd is in het goed te doen.
 - B. geeft ze toe dat het soms ertoe leidt dat mensen dwaas lijken.
 - C. zegt ze dat haar werk vaak frustraties inhoudt.
 - D. is ze het ermee eens dat het moeilijk is om het te rechtvaardigen.
- 19.** In de laatste alinea concludeert de schrijver dat
- A. hij heeft onderschat hoe uitdagend op tv verschijnen kan zijn voor politici.
 - B. hij heeft geleerd hoe overtuigend te kunnen klinken zonder iets zinvol te zeggen.
 - C. Sommige mensen kunnen worden getraind om zowat alles te kunnen.
 - D. kijkers scherpzinniger zijn dan algemeen wordt gedacht.

B: Thuiscomfort: vragen

1. Rebecca's stemming aan het begin van het verhaal is
 - A. rustig en reflecterend
 - B. dwars en prikkelbaar
 - C. rusteloos en geagiteerd
 - D. verdrietig en boos
2. Welke actie onderneemt Rebecca met haar dochter?
 - A. Zij berispt Katy dat ze een puinhoop op de vloer maakt.
 - B. Zij vraagt David om met Katy te praten.
 - C. Ze moedigt Katy aan om een breder scala aan muziek te spelen.
 - D. Ze doet niets om ruzie en gedoe te voorkomen.
3. Wat is Rebecca's houding tegenover de brief die op de tafel ligt?
 - A. De beweringen van de advertentie zijn misleidend.
 - B. Zij hoopt dat het haar zal aanmoedigen om te gaan fitnesssen.
 - C. Het zal haar meer gemotiveerd gaan laten voelen.
 - D. Zij denkt dat de afvalclub goed waar voor je geld is.
4. Als David eerst de woonkamer verlaat, is Rebecca
 - A. opgelucht dat haar baby wakker is.
 - B. verrast om haar baby te horen.
 - C. schuldgevoelens over haar luiheid aan het ontwikkelen
 - D. blij dat ze haar zin heeft gekregen
5. Rebecca maakt zich zorgen wanneer haar man de dranken brengt omdat
 - A. hij over Katy's spullen kan struikelen.
 - B. hij niet houdt van de geur van haar thee.
 - C. thee van de schotel kan druppelen.
 - D. hij kan een meubelstuk beschadigen.
6. Het gordijn waarnaar wordt verwezen in de slaapkamer van Katy
 - A. heeft een identiek ontwerp als eentje van een vorige generatie.
 - B. maakt een klinkend geluid.
 - C. heeft ongewone kleuren.
 - D. houdt het licht 's nachts uit.

C: Introduction to a book about the history of colour: questions

- 1 What problem regarding colour does the writer explain in the first paragraph?
 - A Our view of colour is strongly affected by changing fashion.
 - B Analysis is complicated by the bewildering number of natural colours.
 - C Colours can have different associations in different parts of the world.
 - D Certain popular books have dismissed colour as insignificant.

- 2 What is the first reason the writer gives for the lack of academic work on the history of colour?
- A There are problems of reliability associated with the artefacts available.
 - B Historians have seen colour as being outside their field of expertise.
 - C Colour has been rather looked down upon as a fit subject for academic study.
 - D Very little documentation exists for historians to use.
- 3 The writer suggests that the priority when conducting historical research on colour is to
- A ignore the interpretations of other modern day historians.
 - B focus one's interest as far back as the prehistoric era.
 - C find some way of organising the mass of available data.
 - D relate pictures to information from other sources.
- 4 In the fourth paragraph, the writer says that the historian writing about colour should be careful
- A not to analyse in an old-fashioned way.
 - B when making basic distinctions between key ideas.
 - C not to make unwise predictions.
 - D when using certain terms and concepts.
- 5 In the fifth paragraph, the writer says there needs to be further research done on
- A the history of colour in relation to objects in the world around us.
 - B the concerns he has raised in an earlier publication.
 - C the many ways in which artists have used colour over the years.
 - D the relationship between artistic works and the history of colour.
- 6 An idea recurring in the text is that people who have studied colour have
- A failed to keep up with scientific developments.
 - B not understood its global significance.
 - C found it difficult to be fully objective.
 - D been muddled about their basic aims.

D: The internet today: questions

- 1 The reviewer starts with the metaphor of a city map in order to illustrate
- A. the difficulty in understanding the complexity of the internet.
 - B. the degree to which the internet changes as time passes.
 - C. the difference between potential and real internet use.
 - D. the importance of the internet in people's lives today.
- 8 What do the words 'that test' in line 13 refer to?
- A. providing more widespread access to information
 - B. connecting in a substantial way with other cultures
 - C. establishing principles for developing the internet
 - D. accepting that not everyone in the world is the same

- 9** What point is made about the internet in the third paragraph?
- A. People often struggle to find what they are looking for on it.
 - B. It influences how people relate to family and friends.
 - C. All users have some responsibility for its evolution.
 - D. The way in which it works is far from neutral.
- 10** What does the reviewer suggest about Zuckerman in the fifth paragraph?
- A His recommendations are less impressive than his analysis.
 - B He uses terms that are harder to understand than need be.
 - C He has the same failings that he identifies in other people.
 - D His account of important developments is too negative.
- 11** Which of the following words is used to suggest disapproval?
- A. rounds (line 36)
 - B. contraption (line 36)
 - C. stuff (line 38)
 - D. sniff (line 40)
- 12** What does the reviewer suggest about Aleks Krotoski in the final paragraph?
- A. Her insight into the nature of online friendship is perceptive.
 - B. She has been influenced by Ethan Zuckerman.
 - C. People are often misled by her academic credentials.
 - D. She takes on too many different roles.

C: Introductie tot een boek over de geschiedenis van kleur: vragen

1. Welk probleem betreffende kleur legt de schrijver uit in de eerste alinea?
 - A. Ons beeld van kleur is sterk beïnvloed door veranderende trends.
 - B. Analyse is gecompliceerd door de overweldigende hoeveelheid van natuurlijke kleuren.
 - C. Kleuren kunnen verschillende associaties hebben in verschillende delen van de wereld.
 - D. Bepaalde populaire boeken achten kleur als insignificant.

2. Wat is de eerste reden die de schrijver geeft voor het gebrek aan academisch werk over de geschiedenis van de kleur?
 - A. Er zijn problemen met de betrouwbaarheid in verband met de beschikbare artefacten.
 - B. Historici hebben kleur beschouwd als iets buiten hun vakgebied.
 - C. Het gebruiken van kleur als onderwerp voor academisch onderzoek is op neergekeken.
 - D. Er bestaat weinig documentatie voor historici om te gebruiken.

- 3 De schrijver suggereert dat de prioriteit bij het uitvoeren van historisch onderzoek naar kleur is om
 - A. de interpretaties te negeren van andere moderne historici.
 - B. zich te richten op zo ver terug als het prehistorische tijdperk.
 - C. een manier te vinden om de massa van beschikbare gegevens te organiseren.
 - D. foto's en informatie uit andere bronnen met elkaar te koppelen.

- 4 In de vierde paragraaf zegt de schrijver dat de historicus over kleur moet voorzichtig zijn
 - A. om niet op een ouderwetse wijze te analyseren.
 - B. bij het maken van fundamentele onderscheidingen tussen belangrijke ideeën.
 - C. om niet onwijze voorspellingen maken.
 - D. bij het gebruik van bepaalde termen en concepten.

- 5 In de vijfde paragraaf zegt de schrijver dat er meer onderzoek moet worden uitgevoerd over
 - A. de geschiedenis van de kleur met betrekking tot objecten in de wereld om ons heen.
 - B. de zorgen die hij in een eerdere publicatie heeft laten merken.
 - C. de vele manieren waarop kunstenaars in de loop der jaren kleur hebben gebruikt.
 - D. het verband tussen artistieke werken en de geschiedenis van kleur.

- 6 Een idee dat in de tekst voorkomt is dat mensen die kleur hebben gestudeerd hebben
 - A. zich niet bezig genoeg houden met wetenschappelijke ontwikkelingen.
 - B. de wereldwijde significantie niet ervan begrijpen.
 - C. het moeilijk hebben gevonden om volledig objectief te zijn.
 - D. hun basisdoelstellingen onduidelijk weergeven.

D: Het internet van vandaag: vragen

7 De recensent begint met de metafoor van een stadskaart om te illustreren

- A. hoe moeilijk het is om de complexiteit van het internet te begrijpen.
- B. in wat voor mate het internet verandert naarmate de tijd voorbij gaat.
- C. wat het verschil is tussen potentieel en echt internetgebruik.
- D. wat voor belang van het internet in het leven van mensen van vandaag de dag heeft.

8 Waar verwijzen de woorden 'die test' in regel 13 naar?

- A. Een meer wijdverbreide toegang tot informatie
- B. een aansluiting op een wezenlijke manier tot andere culturen
- C. het vaststellen van principes voor het ontwikkelen van het internet
- D. aanvaarden dat niet iedereen in de wereld hetzelfde is

9 Welk punt is er over het internet in de derde paragraaf gemaakt?

- A. mensen worstelen vaak met het vinden waar ze naar op zoek zijn.
- B. Het beïnvloedt hoe mensen relaties hebben met familie en vrienden.
- C. Alle gebruikers hebben een of andere verantwoordelijkheid voor de evolutie ervan.
- D. De manier waarop het werkt is verre van neutraal.

10 Wat stelt de beoordelaar voor over Zuckerman in de vijfde alinea?

- A. Zijn aanbevelingen zijn minder indrukwekkend dan zijn analyse.
- B. Hij gebruikt termen die moeilijker te begrijpen zijn dan nodig zijn.
- C. Hij heeft dezelfde fouten die hij in andere mensen identificeert.
- D. Zijn verslag van belangrijke ontwikkelingen is te negatief.

11 Welke van de volgende woorden wordt gebruikt om afkeur te suggereren?

- A. rondes (regel 36)
- B. toestel (regel 36)
- C. dingen (regel 38)
- D. snuif (regel 40)

12 Wat suggereert de beoordeler over Aleks Krotoski in de laatste alinea?

- A. haar inzicht in de aard van de online vriendschap is scherpzinnig.
- B. Zij is beïnvloed door Ethan Zuckerman.
- C. Mensen worden vaak misleid door haar academische kwalificaties.
- D. Ze neemt te veel verschillende rollen aan.

Appendix C: Raw scoring for individual participants

<u>Participant</u>	<u>Condition</u>	<u>L1 narr.</u>	<u>L1 exp.</u>	<u>L2 narr.</u>	<u>L2 exp.</u>
1	paper	.57	.50	.83	.33
2	paper	.57	.67	1.00	1.00
3	paper	.71	.83	.50	.83
4	paper	.71	1.00	.83	.83
5	paper	.83	.33	.71	.50
6	paper	.67	.83	.71	.67
7	paper	1.00	.67	.71	.17
8	paper	.83	1.00	.33	.67
Average		.74	.79	.71	.63
STDEV.		.14	.17	.19	.26
9	digital	.71	.50	.83	.67
10	digital	.57	.50	.83	.50
11	digital	.86	.50	1.00	.67
12	digital	1.00	.17	.83	.67
13	digital	.29	.67	.83	.67
14	digital	.57	.50	.83	.67
15	digital	1.00	.67	.86	.83
16	digital	1.00	.83	.86	.33
Average		.75	.54	.86	.63
STDEV.		.24	.18	.05	.14