Impacting the social presence of virtual agents by scaling the fidelity of their speech and movement

Julian Fietkau

February 19th, 2015

Master's thesis

for the purpose of attaining the academic degree
Master of Science. (M.Sc.)

First supervisor: Prof. Dr. Frank Steinicke
Second supervisor: Prof. Dr. Martin Christof Kindsmüller

Fachbereich Informatik
Universität Hamburg

Contents

Abstract

Virtual agents are constructs that fulfill human or human-like roles in virtual environments, but are directly controlled by software instead of real humans. They have use cases such as presenting information, demonstrating actions or simulating a social environment. If a real person perceives them as sufficiently human-like, they may induce social phenomena like empathy, competition or conversational turn taking, even if the person is consciously aware that the agent is purely virtual.

This thesis explores the influence of technical fidelity on perceived social presence in terms of the virtual agents' speech and movement. Both of these two variables were assigned different implementations of varying technical sophistication, from text-to-speech output to fully recorded voices and from a completely rigid idle body to a high-quality relaxed idle animation based on motion capturing data. The various combinations were tested in an experiment using a head-mounted virtual reality display in order to measure their influence on perceived social presence. This thesis describes the experiment and its results.

Keywords: avatars, head-mounted displays, social presence, virtual agents, virtual reality

1. Introduction

For several decades now, personal computers have been capable of producing real-time 3D graphics, predominantly used in games, that – even if they are not photorealistic – look convincingly enough like a spatial location to evoke a sense of immersion (Slater, Usoh, & Steed, 1994). In order to populate these environments, *virtual agents* (perhaps more commonly known as "non-player characters") are commonplace. They are virtual humanoid characters controlled by software. Depending on the quality of their implementation, they may be a terrific addition to an immersive world, or they might feel artificial and jarring.

In the context of this thesis, we[1] are concerned with the technical aspects of such implementations. Specifically, we investigate whether the technical quality of their voice or their animation has a strong influence on the user's feeling of interacting with a person, even if they are aware that there is no real human behind the virtual agent. Some unconscious social actions might take place even in exchanges with virtual agents (Biocca, Harms, & Gregg, 2001).

We make a point of focusing on characteristics that are not easily communicated through a static screenshot. Voice and animation quality are perhaps not the first things to come to mind when we consider realism in virtual environments, but we think that neglecting them outright could have very negative consequences for the user's feeling of social presence (a term we define on page 6).

On the other hand, if we know how that feeling interacts with the fidelity of our virtual agents' voice and animation, then we would be better equipped to find compromises between it and development resources.

This, all in all, is why we decided to examine this specific area of VR research further, and conduct an experiment to produce some reliable answers.

We start out by defining a number of important concepts in chapter 2, relying on established knowledge wherever possible. In chapter 3 we describe our experiment in detail, from the initial idea through the design decisions and including a summary of the final implementation, before analyzing and interpreting the results in chapter 4. We close with a summary and conclusion in chapter 5. Bulk data can be found in the appendix.

[1] Of course this is a master's thesis, so any usage of the first person plural in the manuscript refers more or less exclusively to the author, who even has to certify that he wrote everything by himself. Still, we stick to this pronoun not only because it is the polite thing to do, but also as a respectful nod towards the friends, colleagues and advisors who contributed to discussions, talked about ideas or gave valuable feedback. Thank you!

2. Definitions

In order to create a common understanding of the core concepts of this work, it is vital that there be agreed-upon definitions. Wherever possible, we base our definitions on previous established works to increase the viability of this work as a stepping stone for future scientific progress.

2.1. Virtual Reality

The term *virtual reality* (VR) has historically often been defined in terms of the hardware used to convey a particular medial experience to a human user (Krueger, 1991). To alleviate the ties to concrete technological developments, Steuer (1992) proposes a definition based on the perception of the experience rather than the method of implementation, he defines *virtual reality* as "a real or simulated environment in which a perceiver experiences telepresence" (Steuer, 1992, p. 7), building upon his previously established definition for *telepresence* as "the experience of presence in an environment by means of a communication medium" (Steuer, 1992, p. 6).

Even though this definition might at first glance seem overly broad, the mandate of achieving telepresence using a communication medium (as opposed to natural human senses) covers a lot of past and future implementations, and Steuer makes a convincing case for not chaining the concept of VR to classes of hardware like head-mounted displays or data gloves, which is why we operate on the basis of his definition even though this work happens to have a concrete technical scope in that we focus on a VR experience using a head-mounted display (see section 3.3.1).

2.2. Virtual Agents

Even though *virtual agents* have been extensively studied in works such as Caridakis et al. (2008) or Kopp, Sowa, and Wachsmuth (2003), a systemic definition of the term is often not supplied and there does not seem to be an agreed-upon understanding of the term. We provide our own definition as follows.

We understand an *agent* (in the context of software programming) to be a software construct that possesses agency, i.e. something that distinguishes between its own behavioral autonomy and the environment in which it exists. An agent may have some perception of its environment, and its actions may have consequences within the environment. A *virtual agent* is then defined to be an agent that exists in a virtual reality.

Virtual agents are not *virtual avatars*, because the latter represent and are controlled by human users while the former are controlled by software (Blascovich & Bailenson,

2011). However, both belong to the overarching category of *virtual actors*. Some of the results of this experiment may be applicable to avatars as well as agents, but since we only tested agents, we do not wish to make any claims to that effect.

2.3. Social Presence

As mentioned above in section 2.1, Steuer (1992) provides a useful definition for the term "presence" (within the context of VR). While he also touches on telepresence, he does not talk about *social presence*. To find a good definition for this concept, we consult Biocca et al. (2001), who establish what they call "three dimensions of social presence":

> *Co-presence:* The degree to which the observer believes he/she is not alone and secluded, their level of peripherally or focally awareness of the other, and their sense of the degree to which the other is peripherally or focally aware of them.
>
> *Psychological Involvement:* The degree to which the observer allocates focal attention to the other, empathically senses or responds to the emotional states of the other, and believes that he/she has insight into the intentions, motivation, and thoughts of the other.
>
> *Behavioral engagement:* The degree to which the observer believes his/her actions are interdependent, connected to, or responsive to the other and the perceived responsiveness of the other to the observer's actions.

From: Biocca et al. (2001, p. 2)

They further divide these three dimensions into various factors like awareness, attention, understanding, and interaction. However, their high-level overview is sufficient for our experiment.

2.4. Fidelity

The concept of *fidelity* (as it is understood in the context of technology) is etymologically rooted in "faith"/"faithful" and refers to "the degree to which something matches or copies something else" (Merriam-Webster Dictionary, 2015). As the presentation of our virtual agents aims to emulate the real world, we interpret the fidelity of a property of a virtual agent as something akin to a degree of closeness to the real-world counterpart.

We would further like to highlight the contrast between *fidelity* and *realism*. We understand fidelity to be an inherent property of the implementation of the virtual agent, the degree of fidelity is a design decision. Realism, on the other hand, is the (intended) *result* of a high degree of fidelity, it is inevitably influenced not only by the virtual agent, but also the rest of the VR experience, and it is dependent on a human observer.

Real-world applications have to make certain trade-offs when it comes to fidelity. Even though a higher degree of fidelity is helpful in achieving a more realistic experience, it also tends to be more difficult (and thus costly) to achieve than lower-fidelity alternatives. The examples given in sections 3.2.2 and 3.2.3 might illuminate the concept further.

2.5. Idle Motion

Even if a human being is not actively doing anything in particular, their body never stops moving completely. They unconsciously perform actions that we summarize as *idle motion* (Egges, Molet, & Magnenat-Thalmann, 2004), such as shifting their weight, slightly moving their arms, or mildly moving their head while gazing around. These actions are involuntary and require concentrated effort to be suppressed, which is why they are crucial for a virtual agent to appear convincingly "alive" instead of appearing to be a statue. So-called *idle animations* are commonplace for virtual agents in modern games (Starck, Miller, & Hilton, 2005). We hypothesize that the fidelity (or utter absence) of idle motion may have an influence on the virtual agent's social presence.

3. Experiment

Our research is rooted in the question of how the technical fidelity of virtual agents influences their social presence in a VR setting. This chapter begins by formulating a number of hypotheses about the interrelations of speech and movement fidelity with user perception and behavior.

To evaluate the validity of our hypotheses, we conducted an experiment involving binary comparisons between pairs of virtual agents whose fidelity of speech and movement had been set to various preconfigured levels. The sections starting from 3.2 detail the design decisions that went into it as well as the technical execution. A summary of the results follows in chapter 4.

3.1. Hypotheses

The possible interactions between the kinds of fidelity that we intend to manipulate and the social presence of the virtual agents are manifold, but some ideas and hunches are certainly more obvious than others. For example, given that higher fidelity virtual agents tend to be more difficult to develop, and seeing that this development happens in real-world applications anyway, it is easy to assume that high-fidelity virtual agents are developed because they are better at producing the respective intended results (depending on the use case). If that is indeed the case, then it is also reasonable to look into whether stronger social presence may be a factor in their increased efficacy, which leads us to our first set of hypotheses:

Hypothesis 1a: A virtual agent with a higher technical fidelity in terms of speech will have a stronger social presence compared to one with a lower fidelity.

Hypothesis 1b: A virtual agent with a higher technical fidelity in terms of movement will have a stronger social presence compared to one with a lower fidelity.

These hypotheses imply positive correlations between the technical fidelity of the virtual agent in terms of one of the two properties *speech* and *movement*. To test them, we need to define how exactly we intend to manipulate their fidelity (which happens in sections 3.2.2 and 3.2.3) and we have to provide a measure for their social presence, which we outline at the beginning of the following section 3.2.

Experimental data that would substantiate the above two hypotheses would allow us to infer further details. For example, there could be interaction effects between the fidelity of the two properties – or for the sake of simplicity, it might make sense to assume

that they act independently until proven otherwise.

Hypothesis 2: Changes in the fidelity of speech and changes in the fidelity of movement will independently influence the social presence of the virtual agent.

Since we have full control over the experimental software, we are at liberty to record the time that the participants take to make their choices. The next step would then be to draw conclusions from the decision duration time to the difficulty of the choice – it seems reasonable that someone would take more time to make a decision if the choice is extraordinarily difficult.

If we can define a metric for the difficulty of the choice between two of our virtual agents, then we might find a correlation to the duration of the choosing phase.

Hypothesis 3: Comparing virtual agents in terms of social presence is easier (faster) if they have a big difference in technical fidelity in terms of speech and/or movement.

For the sake of scope, it should be noted that any systematic analysis of social presence in virtual agents will have to make abstractions from real-world use cases. For example, our experiment can not feature a rich and complex VR scenario with large numbers of virtual agents interacting with different users and with one another. In order to be able to make empirically substantiated claims, we have to reduce the interaction between the virtual agents and the study participants to a clearly defined minimum to ensure clarity and reproducibility.

3.2. Design

Even though we are building upon an existing definition of social presence, there are no substantiated methods to measure it on a scale in an experimental setting. As a simple tool to enable comparisons between the different degrees of fidelity, we construct our experiment around singular binary comparisons. Pairs of differently configured virtual agents are presented to the participant, who judges them in relation to one another and points out the one with the stronger social presence (see figure 1). This process is repeated for all pairs of configurations.

As we are testing two different axes of technical fidelity, namely speech and movement, we design independent degrees of fidelity. Each of them gets implemented as three different realizations, which are described in detail in sections 3.2.2 and 3.2.3.

We also decide to focus our research on a setting where the participant uses a *head-mounted display* (HMD) instead of commodity display hardware. We do this in order to increase the participant's sense of presence, since it has been established that head-

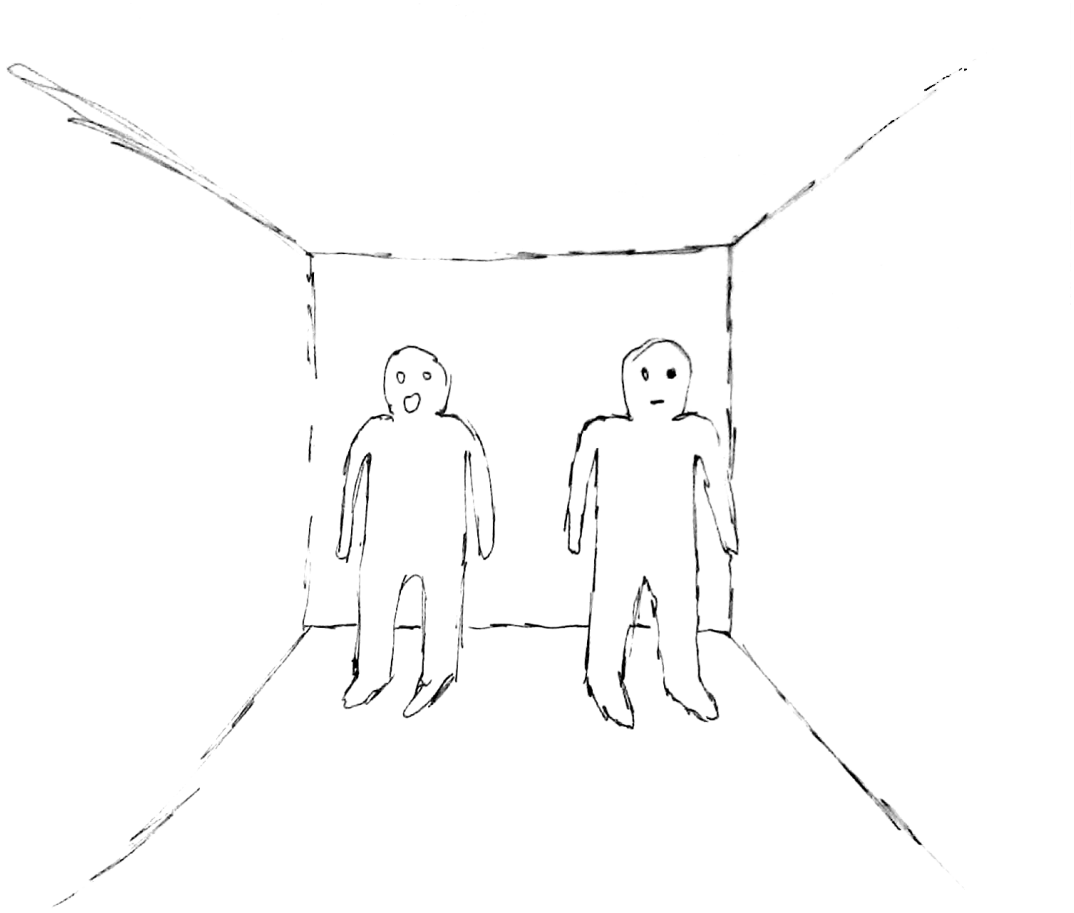

Figure 1: This is the original concept sketch of the virtual experimental setup. The camera is positioned in an otherwise unremarkable scene with two virtual agents who perform an action of speech one after the other, after which the participant decides which of the two has a stronger social presence.

mounted displays have that effect (Pausch, Proffitt, & Williams, 1997). It stands to reason that a higher sense of presence on the user's part could also lead to a higher sensitivity for social presence of virtual agents, or at least it should not be detrimental – however, we are not aware of any empirical proof for this conjecture. At the very least, VR is a research field where we observe a healthy dialogue and openness to new ideas regarding the construction of virtual agents.

3.2.1. Questionnaire

We created a digital questionnaire to guide the participant through the experiment procedure. After the initial greeting, the participant sits down at the desk and finds the questionnaire displayed on the PC monitor in a fullscreen web browser window.

The questionnaire consists of several segments, their order determined by the structure of the experiment, which will be enumerated as follows.

The full questionnaire can be found in appendix A, p. 38ff. as a display variant optimized for printing.

Demographic and Biological Data

The first few questions cover standard demographic information such as age, gender and occupation. Since the experiment deals with the participants' reactions to acts of speech, among other things, we also ask about their degree of familiarity with the German language, since people with less proficiency might interpret speech (even those that are only pseudo-German, see section 3.2.3) differently or more slowly than someone whose mother tongue is German.

To gauge the influence of medical issues regarding vision or hearing, we also inquire about known issues in those two areas as well as about any vision and hearing corrections that may exist.

Furthermore, we ask participants about their experience with 3D games, 3D stereoscopic displays, and head-mounted displays, as each of these could have an influence on the way that virtual agents are perceived.

Lastly, participants are asked to state their handedness (left- or righthanded, or ambidextrous) and their inter-pupillary distance, the latter of which is measured in the laboratory.

Hearing Assessment

Even though participants are asked about any issues with their hearing capacity, we strive to make doubly sure that there are no directional hearing problems, not even potentially unknown ones, that could jeopardize our reliance on directional audio signals during the experiment. To that end, we conduct a very brief directional hearing assessment of each participant using the *Home Audiometer* software by Esser (2012–2015). It tests both ears' hearing capacity across the frequency spectrum typically audible to humans and displays the results graphically.

The questionnaire makes it abundantly clear to the participants that our hearing assessment is, for a number of reasons, not a substitute for any medical procedure. Our audio equipment is not professionally calibrated, we're likely to have high levels of ambient noise (e.g. due to the technical equipment in the laboratory and the relative proximity to the Hamburg Airport), and our personnel are not trained to make any medical diagnoses. However, the results of the hearing assessment would give us the possibility to react to any detectable directional hearing issues that might occur.

Lateral Preference Inventory

The *Lateral Preference Inventory* – or, in full, the *Lateral Preference Inventory for Measurement of Handedness, Footedness, Eyedness, and Earedness*, and in short, the LPI – is a set of 16 questions developed by Coren (1993). It is intended to determine the four abovementioned lateral preference indices (hand, foot, eye, ear). We include it in our questionnaire to acquire some more detailed information than just the participants' stated handedness, especially since any lateral preferences for vision and hearing might be relevant for our results even though the participants themselves might not even be consciously aware of them.

Simulator Sickness Questionnaire

The *Simulator Sickness Questionnaire* created by Kennedy, Lane, Berbaum, and Lilienthal (1993) is a standard tool to gauge the extent to which the participant might be affected by simulator sickness (also known as cybersickness), a set of short-term symptoms that can arise if a person spends a prolonged amount of time using VR hardware.

The SSQ is split into a pre- and a post-experiment half, each consisting of identical questions about the participant's subjective well-being. It is designed to detect whether any temporary health effects (such as nausea, eyestrain, or dizziness) are produced or amplified by the experiment.

Post Questionnaire

The general post questionnaire consists of a small number of questions tailored to our experiment and the local circumstances. Specifically, we ask the participants about any outside distractions that might have occurred and about their opinion of the experiment, including opportunities for free-form answers and feedback.

Slater-Usoh-Steed Questionnaire

The *Slater-Usoh-Steed Questionnaire* intends to measure a VR system's degree of *immersion* as defined by Slater et al. (1994). In the scope of this thesis, we are not overly concerned with the concept of immersion by itself, but the questionnaire still provides valuable data about how the participants perceived the experience and the extent to which they themselves had a sense of presence.

3.2.2. Movement

Since the social actions of our virtual agents are heavily based on speech, their movement might seem like a secondary concern. However, in order to create a convincing social presence, the usage of suitable idle motions (see section 2.5) is a big contributor to social presence (Egges et al., 2004).

For the highest degree of fidelity that is feasible, we use idle animations based on high resolution *motion capturing* data, a process that creates animations for virtual agents based on recording the movements of real actors (Moeslund, Hilton, & Krüger, 2006). In real-life applications, this is a costly approach compared to, for example, *keyframe animation* (which entails a 3D animator creating several "key" poses and interpolating in-between movements), but understandably provides more realistic results. For the purposes of our experiment, we rely on commercially available high-quality animations that surpass anything that we could produce in the local laboratory.

The obvious opposite end of the movement fidelity scale is the completely frozen virtual agent with no idle motions at all. This is trivially easy to implement, fulfilling our expectation that lower-fidelity approaches tend to have a smaller resource impact during development.

For the in-between step, a keyframe-based animation would be a possible middle ground in terms of fidelity, and the comparison between the social presence for keyframe animations versus motion capturing animations in the general case would certainly be of interest. However, for our specific experiment, such a comparison would be difficult to generalize, because any difference in perceived social presence may just as well be rooted

in the specific movements that make up the two animations we would use instead of their overall categories. In other words: We would only be comparing one specific keyframe animation with one specific motion capturing animation. To mitigate this issue and permit a general inference, we would have to compare a large number of examples from each category so that we would be able to prove the presence of statistically significant differences, but this is too far beyond the scope of our experiment to be feasible.

Instead, we base our in-between step on the full motion capturing animation, but manipulate it in a way that reduces its fidelity. To that end, we exclude parts of the 3D model from the idle animation, namely the hands and the legs. For the hands, we simply ignore them altogether, leaving them non-animated. For the legs, instead of using the motion-capturing data, we enable a feature called *inverse kinematics* (Tolani, Goswami, & Badler, 2000), which describes a set of algorithms that are capable of making sure that the virtual agent's feet stay connected to the ground, even if the upper body moves (or the ground becomes uneven, which is not applicable to our experiment). As a result, the legs no longer use the prerecorded idle animation, but instead do the minimal amount of movement that is needed to plausibly support the upper body. We believe that this approach is a suitable compromise to reduce the movement fidelity.

3.2.3. Speech

There are many kinds of acts of speech that could be considered viable for our experiment. Depending on the use case, virtual agents in different applications may be used to ask questions, deliver instructions, perform back-and-forth conversations or fulfill any number of communicative roles.

However, since the experiment specifically attempts to test for effects of the *technical fidelity* of the speech, our aim was to provide as little distraction through the *content* of the speech as possible. Since our experiment relied on direct comparisons, clearly both sides of any comparison would need to execute the same act of speech, so that any bias that might arise from the content of the speech would be symmetrically canceled out.

Finding Suitable Acts of Speech

Ideally, we would like to rely on being able to make comparisons even across the different trials, which is why the differences in terms of speech content between trials should also be minimized. One way of achieving this would be to reuse the very same sentence over and over for every single trial. However, we suspected that this approach would lead to increased monotony during the experiment, since a full run would encompass a large

number of trials. This could produce a more tiring experience for the participants, which would in turn reduce the quality of the data. We also suspected that continued use of the same sentence could lead to *semantic satiation*, a psychological phenomenon by which a word or phrase seems to lose its meaning and appears increasingly alien if it is repeated a sufficiently large number of times (Esposito & Pelton, 1971). These problems could be mitigated by the use of a number of different sentences instead of a single one, but that introduces variance into the process of understanding and interpreting the speech that could also detract from our results.

This is how we arrived at the idea of using *gibberish speech* (speech that is more or less phonetically and/or syntactically plausible, but does not contain any discernable meaning) instead of real acts of speech. Ideal gibberish speech would enable us to use a variety of different acts of (pseudo-)speech to stave off boredom and semantic satiation, while also keeping all speech at a constant level of semantic contents, that being none at all.

This raises the question of how to generate "high-quality" gibberish, in the sense that it should be nonsensical enough to not contain any meaning, yet sound plausible and familiar enough not to appear overly foreign. Fortunately, solutions to this problem have already been developed. We used a pseudoword generator named *Wuggy* to create our gibberish, which is based on existing psycholinguistic research (Keuleers & Brysbaert, 2010). It is capable of creating polysyllabic pseudowords from any given list of real words while preserving the phonetic constraints of the source language. We used a dataset courtesy of the *Wortschatz* project (Institut für Informatik, Universität Leipzig, 2001) containing the 1000 most common German words, from which we had to filter 16 abbreviations[2]. The remaining 984 German words were fed into *Wuggy* to be used as the basis for our gibberish.

The resulting list of pseudowords was then shuffled randomly to produce sentences of 12 words each. When spoken out loud, each one of them is four to five seconds long, which we considered a reasonable length to enable the participants to judge the speech.

The eight sentences that we used in our experiment are as follows:

1. Kie Verpreils Hopitie Phraxe metes scheches krumciespiel Dimen wor klück Mozualiin Zaß.

2. Putaun ehte pflon veßten düfflich La Fing hürte Kopp geripten Südchen Daude.

[2]The following abbreviations were manually removed from the word list: AG, CDU, CSU, DDR, DM, dpa, Dr., EU, FDP, GmbH, Mio, Mrd, SPD, USA, WELT, z.B.

3. Lychte rafen Fahl toswenden lält luchsgans gorm dadee Spresten ebstbals vesses Newage.

4. Sis fist Lab Wuderfet kühe Hamte veuten Läuen alny Bopie schäler belögte.

5. Allerlochs spöbten stekken hanuß bes Beren Rie fal rereis Piedes lanter dabbte.

6. Tonzerr for Turicht gopen Gander fürr jor nasen hührend rusband zusel Händern.

7. Vorkau hind nirgst ehka ätmehin umhächst zondern zöln giesen kolst begids Belsallem.

8. Gesprals Marf hillten fiesen Rottel zockte Jen arrhen peit rafe Wuloner zührend.

It should be noted that word capitalization is essentially random, although we made sure to manually capitalize the first word in each sentence.

From Written Words to Audio Signals

To go from the above pseudospeech to audio signals to be played during the experiment, we first had to define the degrees of fidelity to serve as a basis for the experiment.

A viable approach to low-fidelity speech is *text-to-speech* (TTS) software. This term describes software that is capable of taking pure text as an input and converting it to audible speech. Detailing the various approaches to this problem in general would be vastly beyond the scope of this work, but plenty of literature on the subject exists (Sproat, 1997). We are largely interested in the results that the current "state of the art" can produce, so we did a short preliminary analysis of free and commercial consumer-grade text-to-speech systems, with the constraint that they had to support German TTS, since our pseudowords were based on the German phonetic structure.

We evaluated the following applications:

- Google Translate TTS[3]
- IVONA Text to Speech[4]
- Linguatec Voice Reader Studio 15[5]
- Smart Link ImTranslator[6]

[3] https://translate.google.com/
[4] http://www.ivona.com/
[5] http://www.linguatec.de/products/tts/voice_reader/vrs15
[6] http://imtranslator.net/translate-and-speak/speak/german/

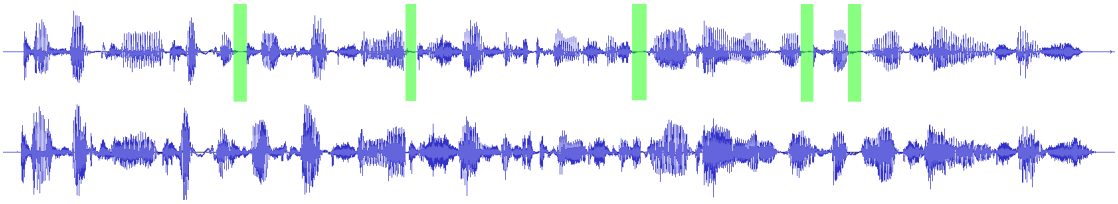

Figure 2: This is a visualization of the waveform of our first recorded gibberish sentence. The top one displays the unaltered recording, while the bottom one represents the modified recording with most of the silent parts (highlighted in green) cut out.

After listening to some example output from each application and comparing them in terms of vocal fluidity, phonetic plausibility and sound quality (this was a subjective comparison without any quantified justification), we decided to use the *IVONA* software as our text-to-speech solution for the experiment. However, the differences between the various products were not glaring, and the research field of speech synthesis is bound to make further improvements in the upcoming years. IVONA was able to read our gibberish without issue and we got the corresponding sound files out of it.

At the opposite end of the fidelity scale, it seemed like the obvious choice to create a fully human-voiced set of recordings. We used an adult male voice for the TTS files, so we had a real adult male listen to them and recorded his voice in attempting to read the sentences at the same speed and with the same inflection. We were not able to create an exact match, but we got as close as we could within our constraints.

To create a third stage in between the previous two, a middle ground between text-to-speech and full voice recording, we took the recorded sound files and made some alterations to them. We duplicated the waveform and played it at a delay of 5 milliseconds, which is too short to be perceived as an echo, but produces a tinny, metallic sound. We also cut out most of the small portions of silence within the recordings (see figure 2), which creates "jumps" in the audio recording that would be impossible to achieve by a real human mouth, but that we observed to be reminiscent of the audible inaccuracies found in text-to-speech sound samples. This leaves us with a set of sound files that still sound somewhat like a real voice (at least more than the TTS output does), and yet differentiate themselves from the full recording enough to be slightly uncanny.

3.2.4. Experimental Procedure

As described above, we have chosen the two properties *speech* and *movement* as our variable degrees of technical fidelity, which we manipulate independently in three steps

each. This means that we have $3 \times 3 = 9$ possible ways to combine the two properties for each of our virtual agents. To reduce confusion, we will call them *configurations* (of the virtual agent) in order to differentiate them from the pairs of configurations, which we will call *constellations*.

Since we ask our participants to compare the configurations in pairs, we would ideally want to pair every configuration with every other one (deliberately excluding constellations where both configurations would be identical), which leaves us with $9 \times 8 = 72$ constellations. This number already includes symmetrical constellations, i.e. if we understand a constellation to be a two-tuple of configurations, and (C_1, C_2) is part of our set of constellations, then so is (C_2, C_1). Even though this doubles the number of trials per participant compared to the hypothetical situation where we would exclude mirrored constellations, they are indeed a big help in reducing the impact of any (conscious or unconscious) lateral preferences on the part of our participants.

Furthermore, we have to keep in mind that our experiment displays the two configurations in each constellation sequentially. As a result, for each of the above 72 constellations, we include it twice: once starting with the left configuration and following with the right, and once starting with the right configuration followed by the left. From here on out, we will call them *left-to-right* and *right-to-left* constellations, respectively. This doubles the total number again, leaving us with our final number of $72 \times 2 = 144$ trials per participant.

With such a big number of trials, each single one has to be very short if the experiment is to be completed in one sitting. With each of the two configuration displays lasting five seconds, and the decision time expected to be between one and three seconds approximately, we expect a total duration of about 12 seconds per trial. At 144 trials in total, we arrive at an expected experiment length of just under 30 minutes, which seems adequate.

3.3. Implementation

This section describes in further detail how our experiment was put together. In particular, we describe the technologies we used, the location as well as other details of the experimental setup, and we explain some noteworthy problems and other occurances from the execution of the experiment.

3.3.1. Technical Components

The central hardware component of our experiment is the *Oculus Rift DK2*[7] head-mounted display. It has a 1920×1080 pixel display covering a $100\,^{\circ}$ horizontal field of view as well as various internal sensors for directional and positional head tracking (Oculus VR, LLC, 2014-2015). It is connected to a standard desktop PC which also has mouse and keyboard for input as well as a traditional LCD monitor.

The *beyerdynamic MMX 2*[8] provides the sound component of the VR experience. It is advertised as a "gaming headset" and also contains a microphone, which was not used during the experiment. It is capable of reproducing sound in the range of 18 to 22000 Hz (beyerdynamic GmbH & Co. KG, 2012-2015).

We decided to use the *Unity Game Engine*[9] (version 4.5) as the basis for our virtual reality experience, which not only has the capability of interacting with the *Oculus Rift* HMD, but also has a proven track record as a relatively easy to use basis for real-time 3D applications in scientific contexts (Craighead, Burke, & Murphy, 2007). It runs on modern PCs on top of *Microsoft Windows* and encapsulates many difficulties of multimedia (in particular real-time 3D graphics) programming behind a graphical interface coupled with freely available documentation. The Unity Engine handles the aspects such as camera projection, lighting, and texturing so that we were able to focus on integrating our assets and programming the experiment.

As mentioned in section 3.2.1, we use the *Home Audiometer* software written by Esser (2012–2015) to perform a brief non-medical hearing assessment. For an example of what the results of an assessment look like, see figure 3.

The questionnaire was delivered through *Google Forms*[10] in a standard web browser.

3.3.2. Assets

We used the *MakeHuman*[11] software to create the 3D model of our virtual agent. It is capable of producing highly detailed and textured 3D models of human bodies that can be adjusted according to various physiological parameters. Our virtual agent is based largely on the MakeHuman defaults with the gender set to 100% male, the race being caucasian, and the physique being slim/athletic. The nondescript black hair and suit are also part of the MakeHuman default assets and proved easy to integrate. See figure 4

[7] `https://www.oculus.com/dk2/`
[8] `http://www.beyerdynamic.de/shop/mmx-2.html`
[9] `http://unity3d.com/`
[10] `https://docs.google.com/forms/`
[11] `http://www.makehuman.org/`

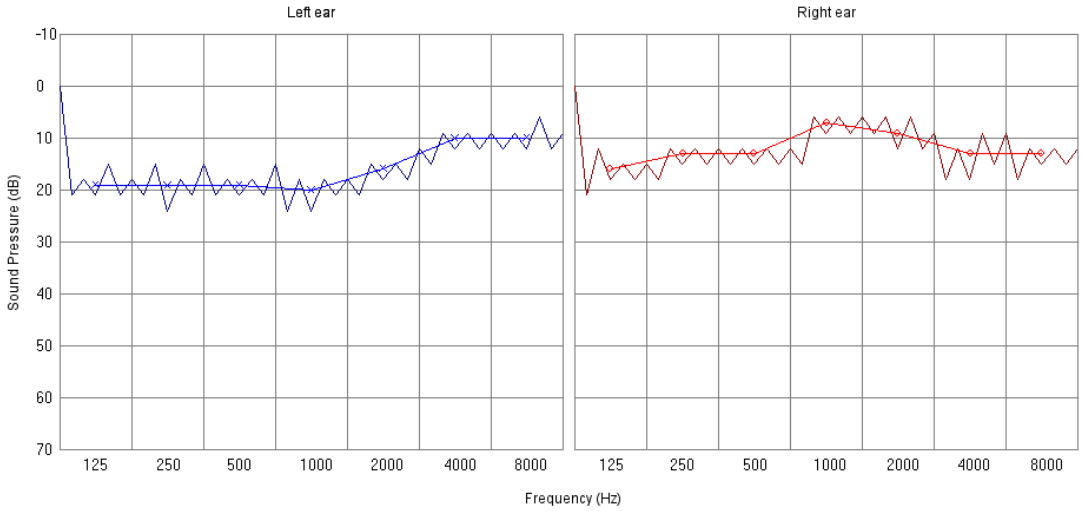

Figure 3: These diagrams show an example result from a hearing assessment done with the *Home Audiometer* software (Esser, 2012–2015). For both ears individually, the application tests various frequencies for their audibility at increasing volumes (the higher the line, the lower the volume, the better the hearing). The results shown here are unremarkable because they stem from a young adult with a healthy hearing capacity.

for a visual representation.

During the initial implementation of the virtual agent and the integration of the sound recordings, it quickly became obvious that the connection between the virtual agent and the voice recordings was not readily apparent as long as there was no mouth movement. Naturally, a human's mouth moves while they talk, so we decided to implement some primitive lip-synchronization into our virtual agent. There are some lip-sync solutions available for the Unity Engine, for example *FaceFX*[12], but their complexity would have been prohibitive at that stage of implementation. Instead, we implemented a barebones lip-sync algorithm written by *UnityAnswers* forum user Naletto (2011) – see figure 5 – which reads the audio file's spectrum data to poll the sound amplitude over a certain time interval and use it to manipulate (stretch, move, etc.) any Unity object.

We applied a suitable scaling to the value and used it to move the jaw bone of our virtual agent downwards synchronized to the audio signal. The result is obviously difficult to appreciate in print, but a pair of screenshots can be seen in figure 6. Thanks to the high quality of the 3D mesh produced by MakeHuman, the simple act of moving the jaw bone results in relatively plausible and visually pleasing facial deformations. Even

[12] `http://facefx.com/`

Figure 4: This is what our virtual agent looks like under ideal lighting and texturing conditions. The *MakeHuman* software makes it feasible to create human 3D models like this without much knowledge about 3D modeling. Please note that this is a high-resolution render image using idealized lighting and that the real-time 3D representation in the Unity Engine has distinctly lower visual fidelity.

```
function BandVol(fLow: float, fHigh: float): float
{
   fLow = Mathf.Clamp(fLow, 20, fMax); // limit low...
   fHigh = Mathf.Clamp(fHigh, fLow, fMax); // and high frequencies
   // get spectrum: freqData[n] = vol of frequency n * fMax / nSamples
   audio.GetSpectrumData(freqData, 0, FFTWindow.BlackmanHarris);
   var n1: int = Mathf.Floor(fLow * nSamples / fMax);
   var n2: int = Mathf.Floor(fHigh * nSamples / fMax);
   var sum: float = 0;
   // average the volumes of frequencies fLow to fHigh
   for (var i=n1; i<=n2; i++){
      sum += freqData[i];
   }
   return sum / (n2 - n1 + 1);
}

var mouth: GameObject;
var volume = 40;
var frqLow = 200;
var frqHigh = 800;
private var y0: float;

function Start()
{
   y0 = mouth.transform.position.y;
   freqData = new float[nSamples];
   audio.Play();
}

function Update()
{
   mouth.transform.position.y = y0 + BandVol(frqLow,frqHigh) * volume;
}

// A function to play sound N:
function PlaySoundN(N: int)
{
   audio.clip = sounds[N];
   audio.Play();
}
```

Figure 5: This is the code supplied by Naletto (2011) on the *UnityAnswers* forum that accomplishes rudimentary automated lip synchronization. While an audio file is being played, this script analyzes the spectrum data and manipulates the y position of a predetermined game object accordingly.

Figure 6: This pair of images shows the impact of the lip-sync script on our virtual agent. The idea of simply moving the jaw bone downwards in proportion to the volume of the sound file is crude, but works surprisingly well.

though it would likely not fool a face-to-face observer, it is convincing enough for use with our HMD and VR scene, where there's a constant distance between the participant and the virtual agents that renders small inaccuracies invisible.

3.3.3. Experimental Setup

We set up our experiment in a room within the main HCI laboratory (Fachbereich Informatik, Universität Hamburg). While the laboratory itself was partially in use during the experiment, our room was seperated by a wall and a door.

Every part of the experiment took place on or around a table that we placed in the middle of the room (see figure 7), with one chair for the participant positioned as if the table were a normal desk, and one chair off to the side for the researcher. The PC was positioned under the table towards the left, with keyboard, mouse and monitor on the tabletop. Participants completed the questionnaire facing the monitor, while for the hearing assessment it was turned to face the researcher and to make it impossible for the participant to read the results of the assessment while it was in progress.

Participants only wore the headphones and the HMD whenever each was needed for the experiment. For the rest of the time, they were kept on the left side of the table. The software setup made it feasible to have both the monitor and the HMD connected and running at the same time without interfering with each other.

Water and snacks were available to participants during break times, but were stored on a shelf behind the researcher while the experiment was in progress.

Figure 7: This photo shows one participant sitting at the table, wearing the HMD and the headphones during the experiment. The keyboard, mouse and monitor are also visible, as is the researcher's laptop. The screen shows the Unity Engine running the experimental VR scene. In the background of the photo, the mostly empty experimental room is visible, with the rest of the HCI laboratory behind the glass windows.

3.3.4. Experimental Procedure

Volunteer participants were acquired from the students at the Fachbereich Informatik as well as the research staff. There was no material compensation for participation, either financial or otherwise.

After being greeted and going over the experiment consent form, the participant would start by filling out the questionnaire page by page, with the measurement of the inter-pupillary distance, the hearing assessment, and the HMD phase in between.

The hearing assessment involved the participant pressing the *Ctrl* key on the keyboard whenever they heard a noise. The audiometer software would adjust the volume and the frequency and switch between the left and right ear. The results of the assessment were stored with the rest of the experimental data.

The HMD section of the experiment involved 144 trials per participant, as explained above. It started with an explanation how to choose between the two virtual agents with the arrow keys and how to advance using the spacebar (see figure 8). Participants were shown a short summary of the *social presence* definition by Biocca et al. (2001) (see section 2.3) in order to know how to make the comparisons and were given the opportunity for prior questions. The 144 trials were broken up into 12 blocks of 12 trials each, with opportunities to take a break between blocks.

As explained in section 3.2.4, we expected a length of about 30 minutes for the HMD phase, which turned out to be rather accurate. In addition to that, the hearing assessment took 10 minutes and the questionnaire about 20 minutes per participant, adding up to an hour in total, which was also within our expectations. A few participants took longer breaks than others, which led to a total time of up to 80 minutes in some instances.

There were no significant problems or distractions throughout the experiment. On a few occassions, the hearing assessment was momentarily disrupted by passing planes (the laboratory is geographically close to an airport), but this proved to not be a problem.

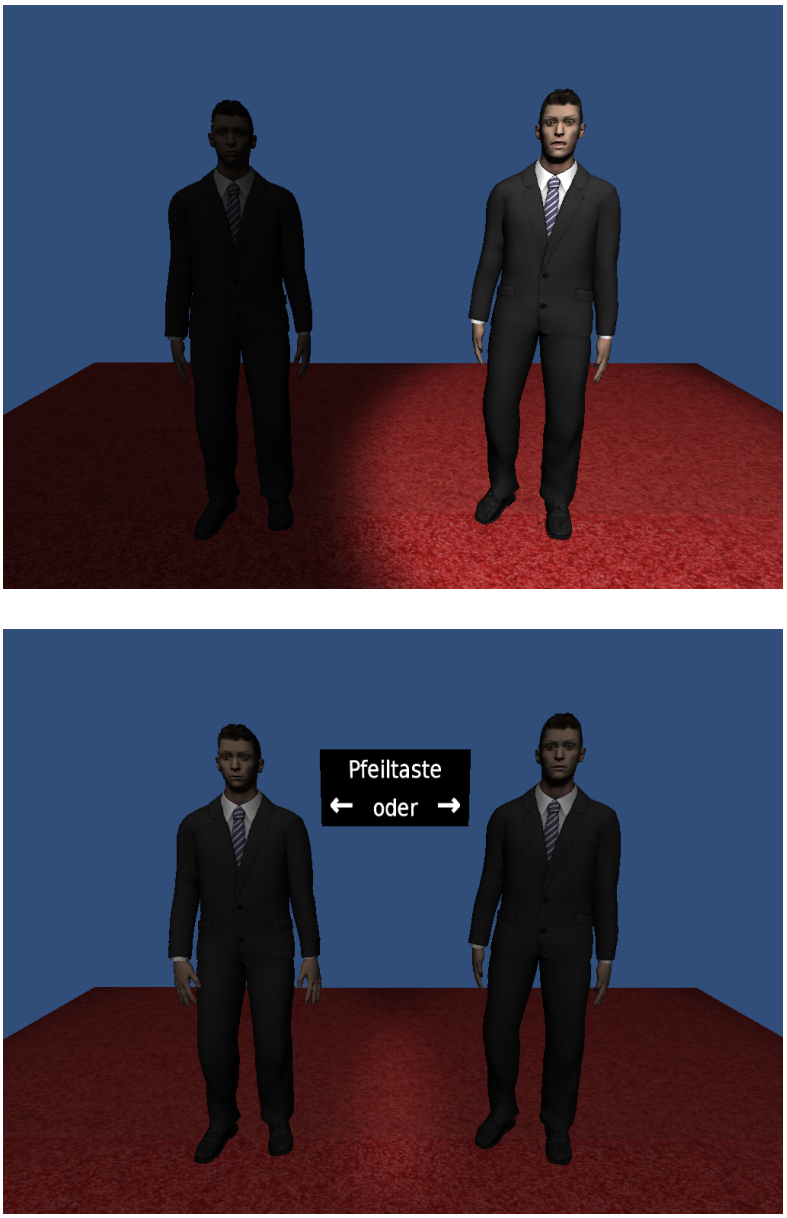

Figure 8: This pair of screenshots shows the experimental VR scene. In the top image, the two virtual agents are displayed and the one on the right is currently talking – the scene puts an additional highlight on the talking agent as an added visual focus cue. In the bottom image, both of them have finished talking and the program is waiting for user input. The participant has to press either the "←" or the "→" key. The instructional message is displayed in German if the participant's mother tongue is German.

4. Results

In this chapter, we examine the results of our experiment and interpret the data we gathered in such a way as to evaluate the hypotheses from section 3.1.

To start off, it bears mentioning that we had $n = 15$ participants aged between 19 and 45 years ($M = 26.65, SD = 6.76$), which should be enough to infer some statistically significant results. However, some of the answers we received make it clear that any results gathered from this experiment are not certain to be applicable to the populace at large. For example, all of our participants had a computer science background (10 with an HCI specialization, 5 without), all of them were native speakers of German, none of them suffered from any notable disorders in vision or hearing, and all participants were right-handed. Any conclusions we draw from the experimental data should only be relied on with these caveats in mind until the experiment can be repeated with participants of a more varied background.

4.1. Evaluation

As we decided early on that our trials would be binary comparisons between different virtual agent configurations, we can now look at the "winner" of each trial (the configuration that was chosen). If we look at how often each value for speech was in the winning configuration (cf. table 1, figures 9 & 10), we observe mean counts for the text to speech condition of $M = 33.53$ ($SD = 12.92$), for the modified recording condition of $M = 48.47$ ($SD = 14.40$), and for the full recording condition of $M = 61.40$ ($SD = 9.49$). Analogously, for the different idle motion values (cf. table 2), we observe mean counts for the "no idle motion" condition of $M = 34.20$ ($SD = 13.52$), for the reduced idle motion condition of $M = 52.33$ ($SD = 8.27$), and for the motion capturing idle motion condition of $M = 56.87$ ($SD = 8.06$).

All of the value counts are normally distributed across subjects according to a Shapiro-Wilk test at the $p < 0.05$ level.

Using the Kruskal-Wallis rank sum test, we can not confirm at the $p < 0.05$ level that the winning counts for the different degrees of fidelity are based on underlying distributions with distinct location parameters.

A χ^2 test did not assert any interdependence between the winning speech values and the winning idle motion values across all trials.

We analyzed the effects of display order (left to right or right to left) and the randomly chosen gibberish sentence on the winning fidelity values with a repeated measures ANOVA and paired-samples t-tests. For the winning speech value, there are no

subject id	text to speech	modified recording	full recording
1	16	66	62
2	23	44	77
3	44	44	56
4	25	63	56
5	35	49	60
6	49	50	45
7	27	55	62
8	38	34	72
9	30	41	67
10	37	55	51
11	16	63	65
12	17	74	53
13	58	33	51
14	46	23	75
15	42	33	69
$Mean$	33.53	48.47	61.40
SD	12.92	14.40	9.49

Table 1: These are the absolute counts of how often each value for speech fidelity has been in the winning configuration per participant.

subject id	no idle motion	reduced idle motion	mo-cap idle motion
1	53	44	47
2	52	38	54
3	14	65	65
4	39	42	63
5	26	49	69
6	20	62	62
7	24	60	60
8	35	52	57
9	34	51	53
10	17	61	65
11	46	50	48
12	39	51	54
13	43	57	42
14	52	43	49
15	19	60	65
$Mean$	34.20	52.33	56.87
SD	13.52	8.27	8.06

Table 2: These are the absolute counts of how often each value for idle motion fidelity has been in the winning configuration per participant.

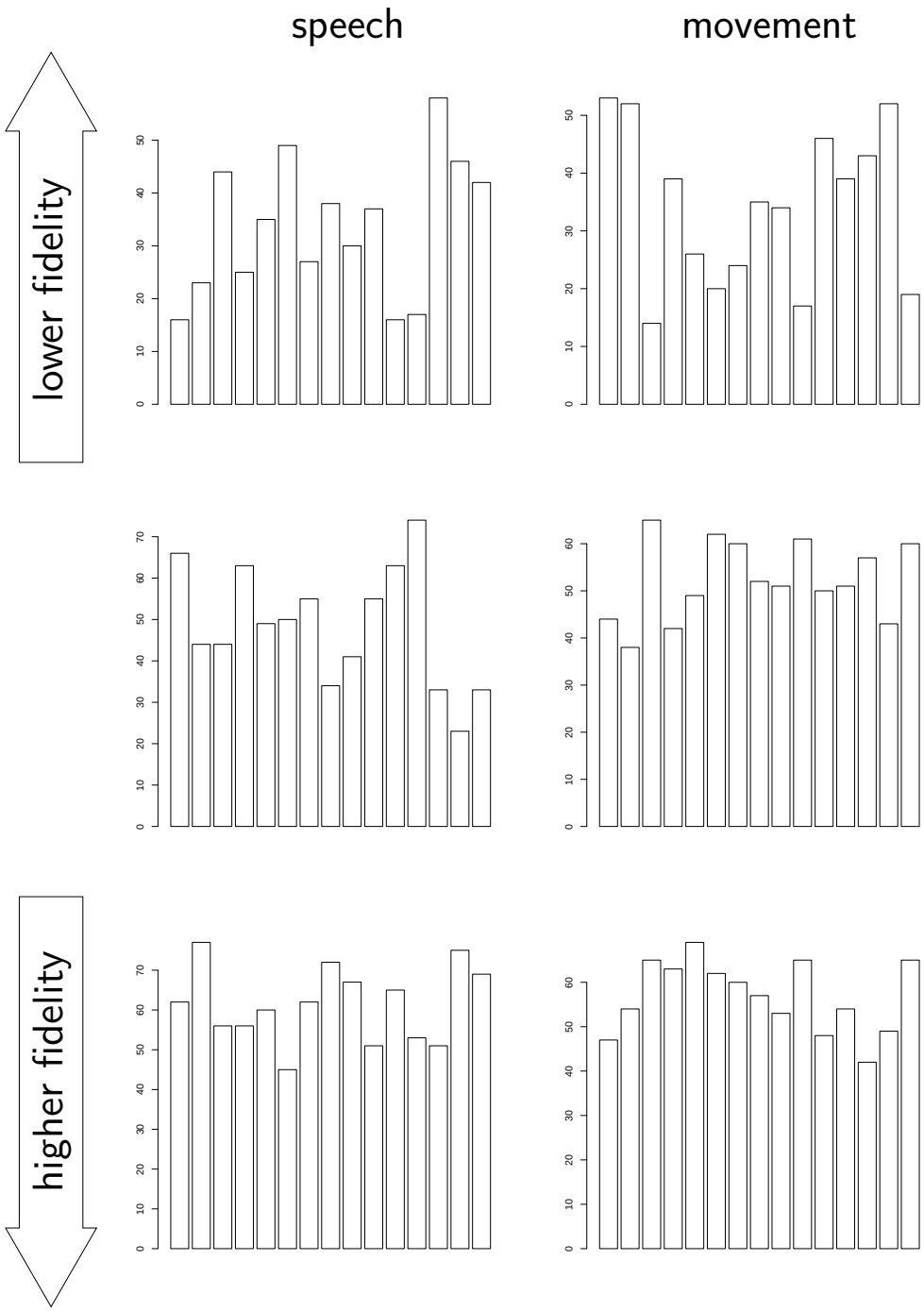

Figure 9: These diagrams show the number of times, for each participant, when a particular value for the fidelity of speech or movement was part of the winning configuration. As the fidelity gets higher, the corresponding variable is chosen more often and more consistently.

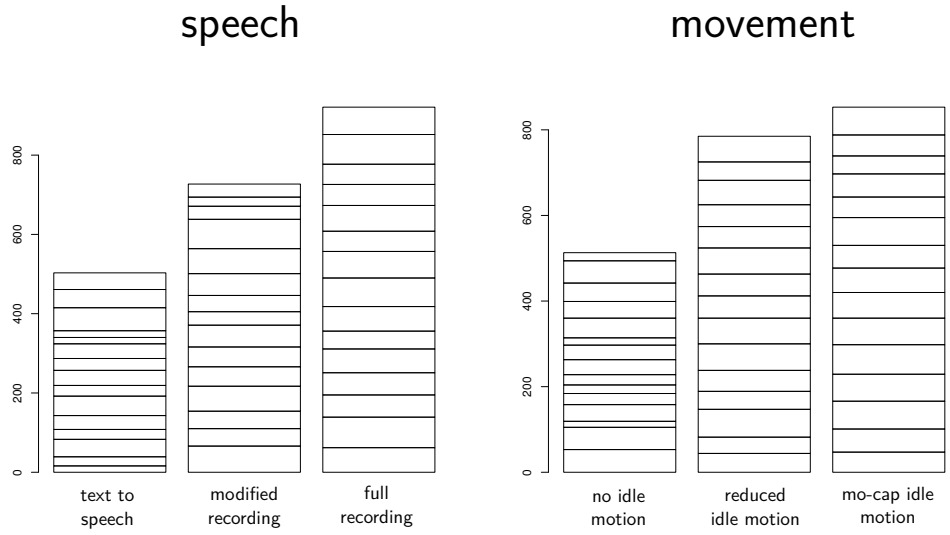

Figure 10: These two diagrams show the cumulative number of times each value of the two variables appeared in the winning configuration across all participants. This makes the weight towards the higher-fidelity values more obvious.

significant interactions. For the winning idle motion value, there is a highly significant interaction between the winning value and the gibberish sentence, but no significant interactions with the display order, nor any interaction effects between the sentence and the display order.

For the time it took the participants to make their individual binary choices (from here on out "choice duration"), we measured delays between 189 and 14850 milliseconds ($M = 1384$, $SD = 1303$). Even though the value range spans two orders of magnitude, even the highest outliers exist within the realm of plausibility, which is why we do not discard any of the data points (see figure 11).

To create a useful measure for the difference in fidelity between two configurations, we have to set a fidelity value for each individual configuration. We do this by interpreting the three values of each of our two variables as integer values in $\{0, 1, 2\}$, with 2 being the highest *fidelity value* and 0 being the lowest. We then define the fidelity value of a configuration as the sum of the fidelity values of its two components. Lastly, we define the *fidelity distance* as $fd_{AB} = |fv_A - fv_B|$ (visualized in figure 12).

If we examine the distribution of the choice duration in relation to the fidelity distance (see figure 13), we see that there are visual hints for a small negative correlation, and the Pearson product-moment correlation coefficient of the two variables is indeed -0.036 at the $p < 0.1$ level.

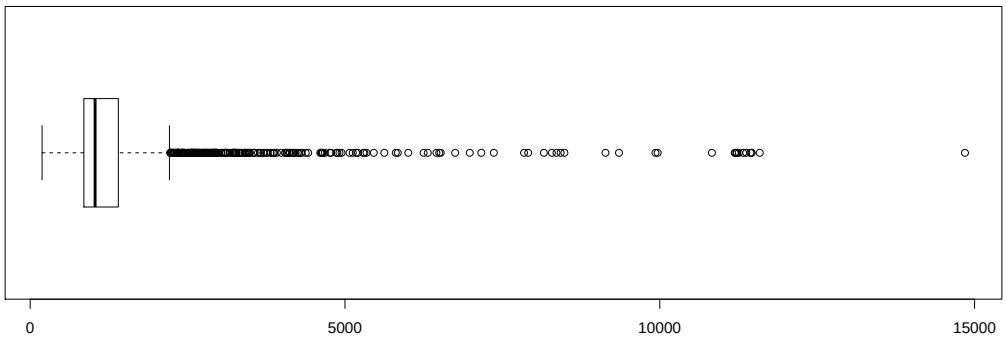

Figure 11: This box plot shows the spread of the choice duration (milliseconds). Even though a large majority of all data points are lower than 1500 milliseconds, there are outliers up to ten times as big. Altogether, 233 points exist outside the $1.5 \times IQR$ distance (233 of 2151, 10.8%).

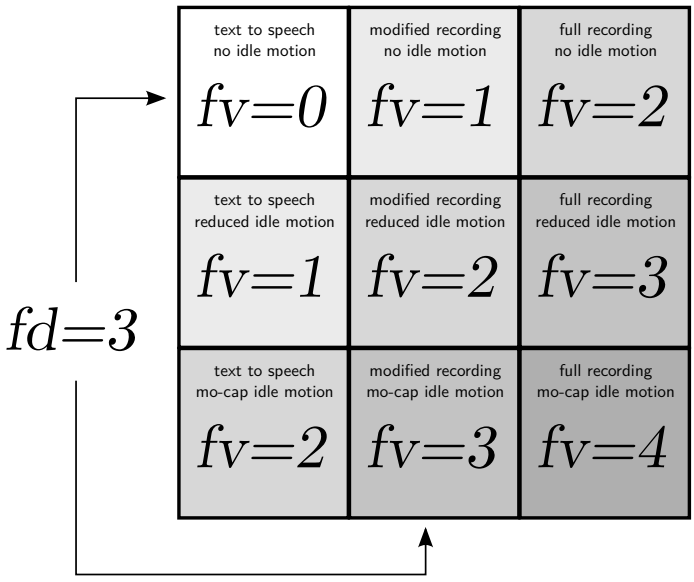

Figure 12: This is a tabular visualization of the *fidelity distance* between two configurations, defined as $fd_{AB} = |fv_A - fv_B|$. The fidelity distance between the top left and the bottom middle configuration is given as an example.

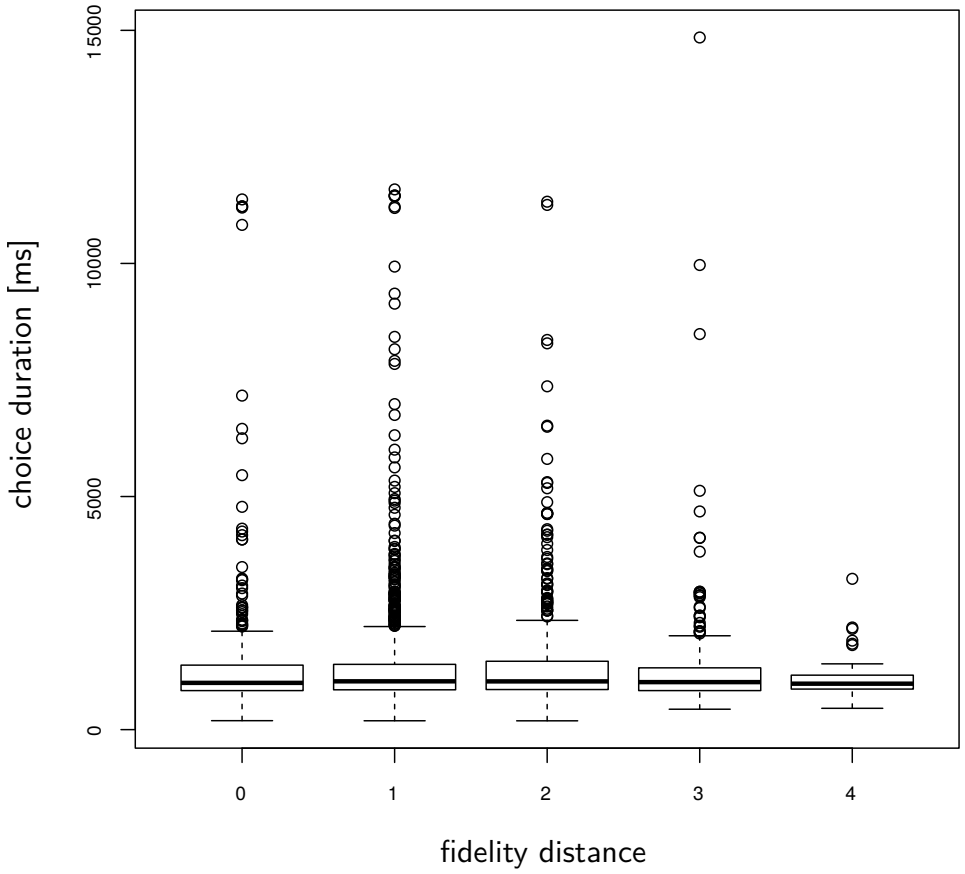

Figure 13: This is an array of box plots showing the spread of the choice duration depending on the fidelity distance. The plots largely resemble the independent one shown in figure 11. For $fd \leq 2$ there is not much variation, but for $fd = 3$ and especially $fd = 4$ it is obvious that the choice duration has far fewer outliers and even a slightly lower median.

The remaining parts of the questionnaire did not lead to any interesting results. The Lateral Preference Inventory aligned very well with the stated handedness of the participants and did not offer any further insight, the Simulator Sickness Questionnaire (fortunately) gave no signs of any health problems more significant than mild fatigue.

4.2. Discussion

Going back to our hypotheses from section 3.1, we are unfortunately not able to substantiate hypotheses 1a and 1b (the existence of significant correlations between speech or idle motion fidelity and the social presence of the virtual agent) based on our experimental data. To the naked eye it seems apparent that the higher fidelity configurations were chosen more often, but it appears that our sample size compared with the relatively small difference between the values (between one to two standard deviations) is not big enough to prove it conclusively, at least not at any worthwhile level of significance. However, it does seem like a worthwhile avenue for further research.

It could be a boon to focus on only one of our two fidelity scales per experiment – perhaps it would have been easier to prove a correlation, even with the same number of participants, if all trials were geared towards one scale of comparison instead of mixing both. At this stage that is a wild guess though.

In reference to hypothesis 2, we were able to provide some evidence that there are no significant interaction effects between the effects that the fidelity of speech and the one of idle motion have on social presence. Even though true independence can not be statistically proven, the data suggests that it is a safe assumption that there are no interactions between the two.

Regarding hypothesis 3 (a negative correlation between the overall fidelity and the duration of the choice phase), we were indeed able to prove the existence of a negative correlation at the $p < 0.1$ level. The effect is small but noticeable. From a user perspective it is not very surprising that configurations with a greater fidelity distance are easier to compare, but it is reassuring that the data corroborates the hypothesis.

Although it is hard to say whether a larger sample size would have led to more significant results, as a suggestion for the future it seems prudent to say that a larger number of participants would likely benefit experiments of this kind. Furthermore, our conjecture is that the idea behind our experimental trials – the binary comparison of two configurations with each combining more than one variable – generates only a small amount of usable information per trial. Maybe a proper measurement scale for social presence would make it easier to draw reliable conclusions, even if it comes at the cost of increased experimental duration.

5. Conclusion

During the work on this thesis, we consolidated several different sources to create suitable notions of both technical fidelity and social presence and to relate them to one another. We conceived an experimental framework based around large numbers of fast-paced binary comparisons to measure the social presence of virtual agents based largely on participants' instant reactions, implemented these ideas into a real-time VR scenario capable of using a state-of-the-art HMD, and executed our experiment with 15 participants, proceeding to analyze the gathered data statistically.

Our intention for this experiment was to investigate any interactions between the fidelity of virtual agents' speech and movement (specifically idle motions) and their social presence in a virtual reality context – one based around a head-mounted display with directional tracking, in our case.

It is unfortunate that we were unable to prove whether higher technical fidelity of virtual agents leads to a stronger social presence, which would have helped explain and steer some of the current developments around virtual agents. In the absence of such statistical proof and with us only having been able to draw some incidental conclusions, the experiment would have to be considered a partial success at best. But of course not every experimental result has to be groundbreaking, and especially in its role as part of a master's thesis, perhaps this lesson that not every experiment can lead to clean results every time is all the more fitting.[13]

Viewed from a more constructive perspective, it bears mentioning that our framework for virtual agents' technical fidelity and how to manipulate it along different axes is a potentially useful tool that did not exist before we developed it in anticipation of our experiment. Now that at least two examples for three-step fidelity manipulation have been established, it will be much easier for future experiments in the same area to establish controlled and reproducible fidelity circumstances.

[13] And needless to say, the author learned a lot about laboratory experiments, VR technology, real-time 3D engines and other methods and technologies throughout the preparation and execution of this thesis.

References

beyerdynamic GmbH & Co. KG. (2012-2015). *beyerdynamic MMX 2.* Retrieved February 18th, 2015, from http://www.beyerdynamic.de/shop/mmx-2.html

Biocca, F., Harms, C., & Gregg, J. (2001). The networked minds measure of social presence: Pilot test of the factor structure and concurrent validity. In *4th annual international workshop on presence* (pp. 1–9). Philadelphia, PA, USA.

Blascovich, J., & Bailenson, J. (2011). *Infinite reality: Avatars, eternal life, new worlds, and the dawn of the virtual revolution.* New York, NY, USA: William Morrow & Co.

Caridakis, G., Raouzaiou, A., Bevacqua, E., Mancini, M., Karpouzis, K., Malatesta, L., & Pelachaud, C. (2008). Virtual agent multimodal mimicry of humans. *Language Resources and Evaluation*, *41*(3–4), 367–388.

Coren, S. (1993). The lateral preference inventory for measurement of handedness, footedness, eyedness, and earedness: Norms for young adults. *Bulletin of the Psychonomic Society*, *31*(1), 1–3.

Craighead, J., Burke, J., & Murphy, R. (2007). Using the unity game engine to develop sarge: a case study. *Computer*, *4552*, 366–372.

Egges, A., Molet, T., & Magnenat-Thalmann, N. (2004). Personalised real-time idle motion synthesis. *Computer Graphics and Applications*, 121–130.

Esposito, N. J., & Pelton, L. H. (1971). Review of the measurement of semantic satiation. *Psychological Bulletin*, *75*(5), 330–340.

Esser, T. (2012–2015). *Home Audiometer Hörtest.* Retrieved February 18th, 2015, from http://www.esseraudio.com/de/home-audiometer-hoertest.html

Institut für Informatik, Universität Leipzig. (2001). *Projekt Deutscher Wortschatz – Wortlisten.* Retrieved February 18th, 2015, from http://wortschatz.uni-leipzig.de/html/wliste.html

Kennedy, R., Lane, N., Berbaum, K., & Lilienthal, M. (1993). Simulator sickness questionnaire: An enhanced method for quantifying simulator sickness. *International Journal of Aviation Psychology*, *3*(3), 203–220.

Keuleers, E., & Brysbaert, M. (2010). Wuggy: A multilingual pseudoword generator. *Behavior Research Methods*, *42*(3), 627–633.

Kopp, S., Sowa, T., & Wachsmuth, I. (2003). Imitation games with an artificial agent: From mimicking to understanding shape-related iconic gestures. *Gesture-Based Communication in Human-Computer Interaction, 5th International Gesture Workshop.*

Krueger, M. W. (1991). *Artificial reality 2* (2nd ed.). Reading, MA, USA: Addison-Wesley.

Merriam-Webster Dictionary. (2015). *Fidelity – Definition and more.* Retrieved February 18th, 2015, from http://www.merriam-webster.com/dictionary/fidelity

Moeslund, T. B., Hilton, A., & Krüger, V. (2006). A survey of advances in vision-based human motion capture and analysis. *Computer Vision and Image Understanding*, *104*(2–3), 90—126.

Naletto, A. (2011). *UnityAnswers: Any way of "automatic" lip syncing?* Retrieved February 18th, 2015, from http://answers.unity3d.com/questions/139323/any-way-of-quotautomaticquot-lip-syncing.html

Oculus VR, LLC. (2014-2015). *The All New Oculus Rift Development Kit 2 (DK2) Virtual Reality Headset.* Retrieved February 18th, 2015, from https://www.oculus.com/dk2/

Pausch, R., Proffitt, D., & Williams, G. (1997). Quantifying immersion in virtual reality. In *Proceedings of the 24th annual conference on computer graphics and interactive techniques.* New York, NY, USA: ACM.

Slater, M., Usoh, M., & Steed, A. (1994). Depth of presence in virtual environments. *Presence: Teleoperators and Virtual Environments*, *3*, 130–144.

Sproat, R. W. (Ed.). (1997). *Multilingual text-to-speech synthesis.* Norwell, MA, USA: Kluwer Academic Publishers.

Starck, J., Miller, G., & Hilton, A. (2005). Video-based character animation. In *Proceedings of the 2005 acm siggraph/eurographics symposium on computer animation* (pp. 49–58). New York, NY, USA: ACM.

Steuer, J. (1992). Defining virtual reality: Dimensions determining telepresence. *Journal of Communication*, *42*, 73–93.

Tolani, D., Goswami, A., & Badler, N. I. (2000). Real-time inverse kinematics techniques for anthropomorphic limbs. *Graphical models*, *62*(5), 353–388.

Please note that there are several mentions of commercial products and/or websites in this thesis, some of which we deliberately excluded from this reference list, so that it contains only the sources from which we cite information. If a product or website is merely mentioned in context, but not cited, a web link is included as a footnote in the main text instead of here.

Appendix

The experiment used a digital questionnaire to acquire subject data beyond the boundaries of the HMD experiment. The following is a complete reproduction of the questionnaire. It uses the "for print" view in lieu of the web-based version to facilitate inclusion in a print document, so any references that seem counterintuitive (for example directions to click a button) would make more sense in the interactive web-based version of the questionnaire.

The experiment included $n = 15$ participants in total. Each one was guided through the questionnaire and the experiment. Since the experiment contained 144 trials per subject, the total maximum number would have been $15 \times 144 = 2160$ trials. However, 9 trials were faulty and had to be discarded, mostly because of outside interruptions and short-term software failures, leaving 2151 trial data points available for interpretation.

Because the measurement data from the hearing assessments was not used in the evaluation of the experiment (partly because there was no need, partly because none of the results were at all surprising or interesting), and even though the participants consented to a full publication of all experimental data, we have decided not to include the hearing assessment results with this publication because we feel that the participants' interest in keeping potentially medically sensitive data safe and anonymous weighs heavier than the interest of the public in fully open data access in this particular case.

Raw questionnaire data formatted as CSV

Raw experimental data formatted as CSV

A. Questionnaire

Experiment Questionnaires

All details are collected only in the context of the present study. Thank you for your participation!

* Required

1. **Age** *

.....

2. **Height** *

.....

3. **Profession / field of study:** *

.....

4. **Gender** *
   Mark only one oval.
   - ◯ Male
   - ◯ Female

5. **How would you rate your German language skill?** *
   Mark only one oval.
   - ◯ Native speaker
   - ◯ Fluent
   - ◯ Proficient
   - ◯ Basic
   - ◯ None

6. **Vision correction:** *
   Mark only one oval.
   - ◯ None
   - ◯ Glasses
   - ◯ Contact lenses

7. **Do you have a known eye disorder?**
   Check all that apply.

   - [ ] Color blindness
   - [ ] Night blindness
   - [ ] Dyschromatopsia (red-green color weakness)
   - [ ] Strong eye dominance
   - [ ] Other: .....

8. **Do you suffer from hearing loss?**
   Mark only one oval.

   - ◯ No (healthy hearing capacity)
   - ◯ Mild hearing loss (difficulties understanding speech)
   - ◯ Moderate to severe hearing loss (impossible to understand speech)
   - ◯ Profound hearing loss (impossible to hear speech or most noises)

9. **If you suffer from hearing loss, please check all that apply:**
   Check all that apply.

   - [ ] Asymmetrical hearing loss, more pronounced on the left side
   - [ ] Asymmetrical hearing loss, more pronounced on the right side
   - [ ] Symmetrical hearing loss (both ears affected at about the same level)
   - [ ] Congenital hearing loss (present since birth)
   - [ ] Acquired/Delayed hearing loss (onset later in life)

10. **Hearing correction:**
    Mark only one oval.

    - ◯ None
    - ◯ External hearing aids
    - ◯ Cochlear implants
    - ◯ Other: .....

11. **Do you suffer from a displacement of equilibrium or similar?** *
    Mark only one oval.

    - ◯ Yes
    - ◯ No

12. **Do you have any experience with virtual reality HMDs (such as the Oculus Rift)?** *
Mark only one oval.

	1	2	3	4	5	
no experience	◯	◯	◯	◯	◯	a lot of experience

13. **Do you have experience with 3D computer games?** *
Mark only one oval.

	1	2	3	4	5	
no experience	◯	◯	◯	◯	◯	a lot of experience

14. **How many hours do you play per week?** *

.....

15. **Do you have experience with 3D stereoscopic display (cinema, games etc.)?** *
Mark only one oval.

	1	2	3	4	5	
no experience	◯	◯	◯	◯	◯	a lot of experience

16. **Are you left- or right-handed?** *
Mark only one oval.

- ◯ Left-handed
- ◯ Right-handed
- ◯ Ambidextrous

17. **Inter-pupillary distance (IPD)** *
Please contact the experimenter to measure your IPD.

.....

Hearing assessment

Please contact the experimenter for a short assessment of your hearing ability (approximately 10 minutes).

Please note: This is a very broad test that serves only to highlight any obvious patterns in the context of our experiment. Our staff does not (and can not) perform medical diagnoses. This assessment is not a substitute for a hearing test conducted by trained personnel using calibrated equipment. If you suspect that your hearing may be impaired, please arrange further steps with your medical doctor.

The Lateral Preference Inventory

Simply read each of the questions below. Decide which hand, foot, etc. you use for each activity and then put a check mark next to the answer that describes you the best. If you are unsure of any answer, try to act out the action.

18. **With which hand do you draw?** *
    Mark only one oval.
    - ◯ Left
    - ◯ Right
    - ◯ Either

19. **Which hand would you use to throw a ball to hit a target?** *
    Mark only one oval.
    - ◯ Left
    - ◯ Right
    - ◯ Either

20. **In which hand would you use an eraser on paper?** *
    Mark only one oval.
    - ◯ Left
    - ◯ Right
    - ◯ Either

21. **Which hand removes the top card when you are dealing from a deck?** *
    Mark only one oval.
    - ◯ Left
    - ◯ Right
    - ◯ Either

22. **With which foot would you kick a ball to hit a target?** *
    Mark only one oval.
    - ◯ Left
    - ◯ Right
    - ◯ Either

23. **If you wanted to pick up a pebble with your toes, which foot would you use?** *
    Mark only one oval.
    - ◯ Left
    - ◯ Right
    - ◯ Either

24. **Which foot would you use to step on a bug?** *

Mark only one oval.

- Left
- Right
- Either

25. **If you had to step up onto a chair, which foot would you place on the chair first?** *

Mark only one oval.

- Left
- Right
- Either

26. **Which eye would you use to look through a telescope?** *

Mark only one oval.

- Left
- Right
- Either

27. **If you had to look into a dark bottle to see how full it was, which eye would you use?** *

Mark only one oval.

- Left
- Right
- Either

28. **Which eye would you use to peep through a keyhole?** *

Mark only one oval.

- Left
- Right
- Either

29. **Which eye would you use to sight down a rifle?** *

Mark only one oval.

- Left
- Right
- Either

30. **If you wanted to listen in on a conversation going on behind a closed door, which ear would you place against the door?** *
Mark only one oval.

- ◯ Left
- ◯ Right
- ◯ Either

31. **Into which ear would you place the earphone of a transistor radio?** *
Mark only one oval.

- ◯ Left
- ◯ Right
- ◯ Either

32. **If you wanted to hear someone's heartbeat which ear would you place againsttheir chest?** *
Mark only one oval.

- ◯ Left
- ◯ Right
- ◯ Either

33. **Imagine a small box resting on a table. This box contains a small clock. Which ear would you press against the box to find out if the clock was ticking?** *
Mark only one oval.

- ◯ Left
- ◯ Right
- ◯ Either

Simulator Sickness Questionnaire (Pre)

34. **General discomfort (DE: "Unwohlsein")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

35. **Fatigue (DE: "Ermüdung")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

36. **Headache (DE: "Kopfschmerzen")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

37. **Eyestrain (DE: "Ermüdung der Augen")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

38. **Difficulty focusing (DE: "Schwierigkeiten mit der Sehschärfe")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

39. **Increased salivation (DE: "Erhöhte Speichelbildung")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

40. **Sweating (DE: "Schwitzen")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

41. **Nausea (DE: "Übelkeit")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

42. **Difficulty concentrating (DE: "Konzentrationsschwierigkeiten")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

43. **Fullness of head (DE: "Druckgefühl im Kopfbereich")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

44. **Blurred vision (DE: "verschwommene Sicht")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

45. **Dizzy (eyes open) (DE: "Schwindelgefühl bei geöffneten Augen")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

46. **Dizzy (eyes closed) (DE: "Schwindelgefühl bei geschlossenen Augen")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

47. **Vertigo (DE: "Gleichgewichtsstörungen")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

48. **Stomach awareness (DE: "Magenbeschwerden")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

49. **Burping (DE: "Aufstoßen")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

Experiment Procedure

In the experiment you will be asked to perform a task in a virtual environment while wearing a head-mounted display as well as headphones.

You will see and hear pairs of virtual actors performing an act of speech. You will then be prompted to decide, for each pair, which one has the stronger "social presence" (this term is defined on an introductory slide during the experiment).

Each trial lasts about 12 to 15 seconds. The experiment will be conducted in blocks of 12 trials (about 2.5 minutes each) and will end once all 12 blocks have been completed. The experiment usually takes about 30 minutes. You may take short breaks between blocks, but please try to hold your concentration throughout each block, as the trials within a block happen consecutively.

Thank you!

(Please click "continue".)

You are now ready to start the experiment. Please contact the experimenter.

If you have completed the experiment, please click "continue".

Simulator Sickness Questionnaire (Post)

50. **General discomfort (DE: "Unwohlsein")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

51. **Fatigue (DE: "Ermüdung")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

52. **Headache (DE: "Kopfschmerzen")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

53. **Eyestrain (DE: "Ermüdung der Augen")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

54. **Difficulty focusing (DE: "Schwierigkeiten mit der Sehschärfe")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

55. **Increased salivation (DE: "Erhöhte Speichelbildung")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

56. **Sweating (DE: "Schwitzen")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

57. **Nausea (DE: "Übelkeit")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

58. **Difficulty concentrating (DE: "Konzentrationsschwierigkeiten")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

59. **Fullness of head (DE: "Druckgefühl im Kopfbereich")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

60. **Blurred vision (DE: "verschwommene Sicht")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

61. **Dizzy (eyes open) (DE: "Schwindelgefühl bei geöffneten Augen")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

62. **Dizzy (eyes closed) (DE: "Schwindelgefühl bei geschlossenen Augen")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

63. **Vertigo (DE: "Gleichgewichtsstörungen")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

64. **Stomach awareness (DE: "Magenbeschwerden")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

65. **Burping (DE: "Aufstoßen")** *
Mark only one oval.

	1	2	3	4	
None	◯	◯	◯	◯	Severe

Post Questionnaire

66. **Did you feel immersed in the virtual world?** *
Mark only one oval.

	1	2	3	4	5	
no	◯	◯	◯	◯	◯	yes

67. **Were you distracted from the virtual world by real-world ambient noise?** *
Mark only one oval.

	1	2	3	4	5	
no	◯	◯	◯	◯	◯	yes

68. **Have you been able to see parts of the real laboratory during the experiment?** *
Mark only one oval.

	1	2	3	4	5	
no	◯	◯	◯	◯	◯	yes

69. **Do you think the experiment task was too difficult?** *
Mark only one oval.

	1	2	3	4	5	
no	◯	◯	◯	◯	◯	yes

70. **Do you think the experiment was too long?** *
Mark only one oval.

	1	2	3	4	5	
no	◯	◯	◯	◯	◯	yes

71. **How would you subjectively describe your level of attention during the experiment?** *
Mark only one oval.

	1	2	3	4	5	
very low	◯	◯	◯	◯	◯	very high

72. **Which strategy did you use (e.g., concentrating on certain signals, making a "decision from the gut", etc.)?** *

.....

.....

.....

.....

.....

73. **Any observations regarding the difficulty of the task that you made during the experiment and would like to share?**

.....

.....

.....

.....

.....

74. **Additional comments:**

.....

.....

.....

.....

.....

Slater-Usoh-Steed Questionnaire (SUS)

75. **Please rate your sense of being in the virtual environment, on a scale of 1 to 7, where 7 represents your normal experience of being in a place.** *

I had a sense of “being there“...
Mark only one oval.

	1	2	3	4	5	6	7	
not at all	◯	◯	◯	◯	◯	◯	◯	very much

76. **To what extent were there times during the experience when the virtual environment was the reality for you?** *

There were times when the virtual environment was the reality for me...
Mark only one oval.

	1	2	3	4	5	6	7	
not at all	◯	◯	◯	◯	◯	◯	◯	almost all the time

77. **When you think back to the experience, do you think of the virtual environment more as images that you saw or more as somewhere that you visited?** *

The virtual environment seems to me to be more like...
Mark only one oval.

	1	2	3	4	5	6	7	
images that I saw	◯	◯	◯	◯	◯	◯	◯	somewhere that I visited

78. **During the time of the experience, which was the strongest on the whole, your sense of being in the virtual environment or of being elsewhere?** *

I had a stronger sense of...
Mark only one oval.

	1	2	3	4	5	6	7	
being elsewhere	◯	◯	◯	◯	◯	◯	◯	being in the virtual environment

79. **Consider your memory of being in the virtual environment. How similar in terms of the structure of the memory is this to the structure of the memory of other places you have been today? By 'structure of the memory' consider things like the extent to which you have a visual memory of the virtual environment, whether that memory is in colour, the extent to which the memory seems vivid or realistic, its size, location in your imagination, the extent to which it is panoramic in your imagination, and other such structural elements.** *

I think of the virtual environment as a place in a way similar to other places that I have been today...
Mark only one oval.

	1	2	3	4	5	6	7	
not at all	◯	◯	◯	◯	◯	◯	◯	very much so

80. **During the time of your experience, did you often think to yourself that you were actually in the virtual environment?** *

During the experiment I often thought that I was really standing in the virtual environment...
Mark only one oval.

	1	2	3	4	5	6	7	
not very often	◯	◯	◯	◯	◯	◯	◯	very much so

B. Data: Questionnaire

subject id	Timestamp	Age	Height	Profession / field of study	Gender	How would you rate your German language skill?
1	2014-12-19 15:19:46	22	190	Human-Computer-Interaction	Male	Native speaker
2	2014-12-19 16:18:05	27	180	Student Informatik	Male	Native speaker
3	2014-12-19 17:25:14	21	177	Student Informatik	Male	Native speaker
4	2014-12-19 18:34:41	24	172	HCI	Female	Native speaker
5	2014-12-19 19:33:24	19	181	MCI	Male	Native speaker
6	2014-12-22 11:19:25	25	172	Bachelor MCI	Male	Native speaker
7	2014-12-22 14:26:18	33	182	Post-doc CS	Male	Native speaker
8	2014-12-22 16:11:59	33	185	Informatics	Male	Native speaker
9	2014-12-23 11:35:20	34	168	MCI	Female	Native speaker
10	2014-12-23 14:05:30	24	180	MCI	Male	Native speaker
11	2014-12-23 17:07:39	45	155	computer science	Female	Native speaker
12	2014-12-23 19:01:57	20	192	Computer Science	Male	Native speaker
13	2015-01-12 15:18:22	21	167	MCI Student	Female	Native speaker
14	2015-01-12 18:00:27	24	183	HCI	Male	Native speaker
15	2015-01-12 19:12:41	28	173	phd student	Male	Native speaker

subject id	Vision correction:	Do you have a known eye disorder?	Do you suffer from hearing loss?	If you suffer from hearing loss please check all that apply:
1	None		No (healthy hearing capacity)	
2	Glasses		No (healthy hearing capacity)	
3	Glasses		No (healthy hearing capacity)	
4	Glasses		No (healthy hearing capacity)	
5	None		No (healthy hearing capacity)	
6	Glasses		No (healthy hearing capacity)	
7	Contact lenses		No (healthy hearing capacity)	
8	None		No (healthy hearing capacity)	
9	Glasses		No (healthy hearing capacity)	
10	None			
11	None		No (healthy hearing capacity)	
12	None		No (healthy hearing capacity)	
13	None		No (healthy hearing capacity)	
14	None		No (healthy hearing capacity)	
15	Glasses		Mild hearing loss (difficulties understanding speech)	Symmetrical hearing loss (both ears affected at about the same level)

subject id	Hearing correction:	Do you suffer from a displacement of equilibrium or similar?	Do you have any experience with virtual reality HMDs (such as the Oculus Rift)?	Do you have experience with 3D computer games?
1	None	No	1	3
2	None	No	4	4
3	None	No	1	5
4	None	No	2	1
5	None	No	2	5
6	None	No	1	5
7	None	No	5	3
8	None	No	3	5
9	None	No	1	2
10	None	No	1	5
11	None	No	4	4
12	None	No	2	1
13	None	No	2	1
14	None	No	3	3
15	None	No	5	5

subject id	How many hours do you play per week?	Do you have experience with 3D stereoscopic display (cinema games etc.)?	Are you left- or right-handed?	Inter-pupillary distance (IPD)
1	1	2	Right-handed	4.4
2	10	4	Right-handed	6.1
3	10	2	Right-handed	7.2
4	4	3	Right-handed	5.8
5	25	3	Right-handed	6.5
6	12	3	Right-handed	6.6
7	0	5	Right-handed	6.5
8	3	4	Right-handed	6.0
9	0	3	Right-handed	6.2
10	10	3	Right-handed	6.7
11	0.2	3	Right-handed	5.7
12	6	4	Right-handed	6.5
13	0	3	Right-handed	5.6
14	10	3	Right-handed	6.5
15	20	5	Right-handed	6.8

subject id	With which hand do you draw?	Which hand would you use to throw a ball to hit a target?	In which hand would you use an eraser on paper?	Which hand removes the top card when you are dealing from a deck?	With which foot would you kick a ball to hit a target?
1	Right	Right	Right	Left	Right
2	Right	Right	Right	Either	Right
3	Right	Right	Right	Right	Right
4	Right	Right	Right	Either	Either
5	Right	Right	Right	Either	Right
6	Right	Right	Right	Right	Right
7	Right	Right	Either	Right	Right
8	Right	Right	Right	Left	Right
9	Right	Right	Right	Right	Right
10	Right	Right	Right	Right	Right
11	Right	Right	Right	Right	Right
12	Right	Right	Right	Either	Right
13	Right	Right	Right	Either	Right
14	Right	Right	Right	Right	Right
15	Right	Right	Either	Either	Right

subject id	If you wanted to pick up a pebble with your toes which foot would you use?	Which foot would you use to step on a bug?	If you had to step up onto a chair which foot would you place on the chair first?	Which eye would you use to look through a telescope?	If you had to look into a dark bottle to see how full it was which eye would you use?
1	Right	Right	Right	Left	Left
2	Right	Right	Either	Either	Either
3	Right	Right	Either	Right	Right
4	Right	Left	Left	Right	Right
5	Right	Right	Left	Either	Either
6	Either	Either	Right	Right	Right
7	Either	Either	Left	Right	Either
8	Right	Right	Right	Left	Right
9	Right	Either	Right	Left	Left
10	Right	Right	Right	Right	Right
11	Right	Right	Right	Right	Right
12	Right	Either	Right	Right	Right
13	Either	Either	Right	Left	Left
14	Right	Right	Right	Right	Right
15	Either	Either	Either	Right	Right

subject id	Which eye would you use to peep through a keyhole?	Which eye would you use to sight down a rifle?	If you wanted to listen in on a conversation going on behind a closed door which ear would you place against the door?	Into which ear would you place the earphone of a transistor radio?	If you wanted to hear someone's heartbeat which ear would you place against their chest?
1	Left	Left	Right	Either	Either
2	Either	Either	Left	Right	Left
3	Right	Right	Left	Left	Left
4	Right	Right	Right	Right	Right
5	Right	Left	Right	Right	Right
6	Right	Right	Left	Left	Right
7	Either	Right	Either	Either	Either
8	Right	Left	Left	Left	Left
9	Left	Left	Right	Right	Left
10	Right	Right	Right	Right	Left
11	Right	Right	Right	Right	Left
12	Right	Right	Right	Either	Either
13	Left	Left	Left	Right	Either
14	Right	Right	Right	Right	Right
15	Right	Right	Either	Either	Either

subject id	Imagine a small box resting on a table. This box contains a small clock. Which ear would you press against the box to find out if the clock was ticking?	General discomfort	Fatigue	Headache	Eyestrain	Difficulty focusing
1	Right	1	2	1	1	1
2	Left	1	2	1	2	1
3	Left	2	2	2	2	1
4	Right	1	2	1	1	1
5	Right	2	2	3	2	2
6	Right	1	1	1	1	1
7	Left	1	1	1	2	1
8	Left	1	1	1	2	1
9	Left	1	2	1	2	3
10	Right	1	1	2	1	1
11	Either	1	1	1	1	1
12	Right	1	1	1	2	1
13	Left	1	3	1	2	1
14	Right	1	2	1	3	1
15	Either	1	1	1	1	1

subject id	Increased salivation	Sweating	Nausea	Difficulty concentrating	Fullness of head	Blurred vision
1	1	1	1	1	1	1
2	1	1	1	1	1	1
3	1	2	1	2	2	1
4	1	1	1	2	1	1
5	1	1	1	2	1	2
6	1	1	1	1	1	1
7	1	1	1	2	1	1
8	1	1	1	1	1	1
9	1	1	1	3	1	2
10	1	2	1	1	1	1
11	1	1	1	1	1	1
12	1	1	1	2	1	1
13	2	1	1	2	1	1
14	1	1	1	2	1	1
15	1	1	1	1	1	1

subject id	Dizzy (eyes open)	Dizzy (eyes closed)	Vertigo	Stomach awareness	Burping	General discomfort
1	1	1	1	1	1	1
2	1	1	1	1	1	2
3	1	1	1	1	1	2
4	2	2	2	1	2	1
5	1	1	1	1	1	1
6	1	1	1	1	1	2
7	1	1	1	1	1	1
8	1	1	1	1	1	2
9	1	1	1	1	1	1
10	1	1	1	1	1	1
11	1	1	1	1	1	1
12	1	1	1	1	1	3
13	1	1	1	1	1	2
14	1	1	1	1	1	1
15	1	1	1	1	1	1

subject id	Fatigue	Headache	Eyestrain	Difficulty focusing	Increased salivation	Sweating
1	3	1	1	1	1	1
2	2	1	2	1	1	1
3	2	2	2	2	1	1
4	3	2	2	2	1	1
5	2	1	3	1	1	1
6	2	1	1	1	1	1
7	1	1	1	1	1	1
8	2	1	2	1	1	1
9	2	1	3	2	1	1
10	1	2	1	1	1	1
11	1	1	2	1	1	1
12	3	1	3	1	1	1
13	4	1	3	1	2	1
14	3	1	4	2	1	1
15	2	1	1	1	1	1

subject id	Nausea	Difficulty concentrating	Fullness of head	Blurred vision	Dizzy (eyes open)	Dizzy (eyes closed)
1	1	1	1	1	1	1
2	2	1	1	1	1	2
3	2	2	3	1	1	2
4	1	2	3	1	2	2
5	1	2	1	2	1	1
6	1	1	1	2	1	1
7	1	1	1	1	1	1
8	1	1	2	1	1	1
9	1	2	1	1	1	1
10	1	1	2	1	1	1
11	1	1	1	2	1	1
12	1	2	1	1	1	1
13	1	2	2	1	1	1
14	1	3	2	1	1	1
15	1	1	1	1	1	1

subject id	Vertigo	Stomach awareness	Burping	Did you feel immersed in the virtual world?	Were you distracted from the virtual world by real-world ambient noise?
1	1	1	1	4	3
2	1	1	1	3	2
3	2	1	1	4	4
4	1	1	2	4	2
5	1	1	1	4	2
6	1	1	1	4	1
7	1	1	1	4	2
8	1	1	1	3	1
9	1	1	1	2	1
10	1	1	1	3	1
11	1	1	1	1	1
12	1	1	2	2	3
13	1	1	1	2	2
14	1	1	1	2	2
15	1	1	1	3	2

subject id	Have you been able to see parts of the real laboratory during the experiment?	Do you think the experiment task was too difficult?	Do you think the experiment was too long?	How would you subjectively describe your level of attention during the experiment?
1	1	1	2	3
2	1	2	3	4
3	1	1	2	4
4	1	1	2	4
5	1	1	1	4
6	2	1	2	4
7	2	1	1	4
8	1	1	2	4
9	1	1	1	5
10	1	1	3	4
11	3	3	1	4
12	5	1	3	2
13	2	1	2	4
14	2	1	1	4
15	1	1	2	3

subject id	Which strategy did you use (e.g., concentrating on certain signals, making a “decision from the gut”, etc.)?
1	decision from the gut, voice
2	decision from the gut, clean audio
3	concentrating on audio and movement of the body, speach clearlyness
4	teils spezielle Signale, teils Bauchgefühl
5	I mainly concentrated on the voice of the actors, but didn’t really have a strategy elsewise. “from the gut” describes it pretty well.
6	Comparing the actor’s pattern of movement, i.e. choosing the actor with the most natural movement while speaking his text.
7	motion > no motion, actual voice > tts, rest from the gut
8	at first hearing experince, then body language and facial expressions
9	in erster Linie habe ich nach dem Ton ausgewählt, zu technische, zu klare und wie bei einem Außenreporter verzerrte Sprache. ist als erstes rausgeflogen. Ansonsten hab ich mich auf mein Bauchgefühl verlassen und keine richtige Strategie verfolgt.
10	differentiate between moving and non-moving person, differentiate between natural speech and synthezid speech
11	I thought of one of them being the real person and the other as a virtual language teacher. Still it was not easy to decide.
12	1. loudest speaker, 2. if equal, the one who moves, 3. generally what felt best
13	- allgemeiner Eindruck - ob Stimme “in den Raum” passt - Aufmerksamkeitsrichtung des Sprechers (auf mich gerichtet oder sonstwohin) - bei gleichem Eindruck Ausfall nach dem Motto: “Zu wem passt die Stimme besser”
14	decision from the gut, clearer voice maybee
15	Movement & computer voice vs recorded voice as hints

subject id	Any observations regarding the difficulty of the task that you made during the experiment and would like to share?
1	
2	
3	
4	man konnte jeden einzelnen Bildpixel sehen, stört den “Realismus”
5	
6	Slight difficulties fitting my normal glasses in the Oculus Rift, but nothing too complicated.
7	
8	
9	
10	
11	When it was exactly the same recording I had difficulties to choose.
12	the Oculus Rift has a too low resolution for prolonged watching -> the eyes feel severe pain
13	Die beiden Personen blinzeln wenig/gar nicht/schlecht zu erkennen, was dazu beigetragen haben kann, dass ich selber weniger geblinzelt habe und dadurch die Augen mehr angestrengt wurden.
14	
15	Headtracking would be nice. Felt like the actors looked past me sometimes.

subject id	Additional comments:
1	
2	
3	very nice setup (and chair ;-))
4	das neu laden der Szene nach jedem Vergleich hat das Bild manchmal gefühlt leicht springen lassen (gefühlt leichter Ruck nach rechts oder links) - führte zu leichten Schwindel-Attacken
5	
6	No.
7	nice work!
8	if the voice sounds “metallic/robotic” than the experience is reduced in naturalness
9	
10	
11	
12	
13	
14	
15	

subject id	Please rate your sense of being in the virtual environment on a scale of 1 to 7 where 7 represents your normal experience of being in a place.	To what extent were there times during the experience when the virtual environment was the reality for you?	When you think back to the experience do you think of the virtual environment more as images that you saw or more as somewhere that you visited?	During the time of the experience which was the strongest on the whole your sense of being in the virtual environment or of being elsewhere?	Consider your memory of being in the virtual environment. How similar in terms of the structure of the memory is this to the structure of the memory of other places you have been today? (...)	During the time of your experience did you often think to yourself that you were actually in the virtual environment?
1	4	7	7	6	2	4
2	6	5	5	5	5	5
3	5	2	2	5	3	2
4	4	4	5	5	4	3
5	4	2	2	7	5	4
6	5	2	2	5	6	2
7	6	5	7	7	6	5
8	4	4	5	3	5	4
9	3	4	4	5	1	1
10	3	1	1	2	3	2
11	4	4	4	4	1	2
12	1	1	1	1	7	1
13	3	1	5	5	4	2
14	2	2	3	4	2	2
15	4	4	4	4	4	4

C. Data: Experiment

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
1	0	still	mocap	recording	text to speech	3	left to right	left	1494
1	1	mocap	reduced	text to speech	processed	1	left to right	right	517
1	2	mocap	mocap	text to speech	processed	6	right to left	right	1478
1	3	reduced	mocap	processed	processed	6	right to left	left	1279
1	4	mocap	still	text to speech	processed	4	right to left	right	2008
1	5	mocap	still	text to speech	text to speech	1	left to right	right	1510
1	6	reduced	mocap	recording	processed	5	left to right	left	517
1	7	still	mocap	processed	processed	6	right to left	left	3565
1	8	mocap	still	text to speech	recording	5	left to right	right	881
1	9	still	reduced	processed	processed	8	right to left	right	2869
1	10	mocap	still	recording	recording	5	left to right	left	898
1	11	still	reduced	processed	text to speech	5	left to right	left	716
1	12	reduced	still	text to speech	processed	3	left to right	right	517
1	13	reduced	mocap	processed	processed	5	left to right	left	4376
1	14	still	mocap	processed	text to speech	4	right to left	left	997
1	15	still	mocap	text to speech	text to speech	4	right to left	right	2174
1	16	still	still	processed	recording	4	right to left	right	2853
1	17	mocap	still	text to speech	processed	3	left to right	right	715
1	18	mocap	reduced	text to speech	text to speech	7	left to right	right	1511
1	19	reduced	mocap	recording	processed	6	right to left	left	2919
1	20	mocap	still	processed	recording	5	left to right	right	517
1	21	mocap	reduced	processed	text to speech	8	right to left	left	1643
1	22	reduced	mocap	text to speech	text to speech	3	left to right	left	1462
1	23	mocap	reduced	text to speech	text to speech	8	right to left	right	2124
1	24	mocap	still	processed	processed	4	right to left	left	1743
1	25	reduced	mocap	processed	recording	8	right to left	right	1743
1	26	mocap	mocap	recording	text to speech	5	left to right	left	914
1	27	reduced	still	processed	processed	4	right to left	right	2124
1	28	reduced	still	processed	recording	6	right to left	left	1809
1	29	still	mocap	processed	processed	5	left to right	left	189
1	30	still	reduced	text to speech	recording	2	right to left	right	1544
1	31	reduced	still	text to speech	text to speech	2	right to left	left	518
1	32	reduced	mocap	text to speech	recording	7	left to right	right	1113
1	33	mocap	reduced	text to speech	recording	3	left to right	right	517
1	34	still	mocap	text to speech	processed	6	right to left	right	2207
1	35	mocap	reduced	recording	text to speech	8	right to left	left	517
1	36	reduced	mocap	processed	recording	7	left to right	right	798
1	37	reduced	mocap	text to speech	recording	8	right to left	right	4112
1	38	still	still	recording	processed	3	left to right	right	517
1	39	mocap	mocap	processed	text to speech	5	left to right	left	2570
1	40	mocap	reduced	recording	recording	3	left to right	right	881
1	41	reduced	mocap	recording	text to speech	3	left to right	left	897
1	42	mocap	mocap	text to speech	processed	5	left to right	right	3747
1	43	reduced	reduced	text to speech	processed	8	right to left	right	517
1	44	still	mocap	processed	recording	7	left to right	right	517
1	45	still	reduced	recording	recording	2	right to left	left	948
1	46	reduced	still	text to speech	processed	4	right to left	right	2671
1	47	reduced	reduced	text to speech	processed	7	left to right	right	1909
1	48	mocap	mocap	processed	recording	8	right to left	right	1196
1	49	reduced	still	processed	processed	3	left to right	right	2342
1	50	still	reduced	recording	processed	8	right to left	left	4079
1	51	reduced	still	recording	recording	6	right to left	right	848
1	52	mocap	still	recording	processed	4	right to left	right	2289
1	53	still	still	recording	processed	4	right to left	right	1875
1	54	mocap	mocap	processed	text to speech	6	right to left	left	2323
1	55	still	mocap	text to speech	recording	7	left to right	right	1411
1	56	mocap	reduced	processed	text to speech	7	left to right	left	616
1	57	mocap	reduced	processed	processed	1	left to right	right	1975
1	58	still	reduced	recording	text to speech	6	right to left	left	3267
1	59	mocap	reduced	text to speech	recording	4	right to left	right	517

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
1	60	still	reduced	text to speech	processed	8	right to left	right	1047
1	61	mocap	still	processed	processed	3	left to right	right	1794
1	62	still	mocap	text to speech	text to speech	3	left to right	left	1710
1	63	still	mocap	recording	processed	6	right to left	right	1958
1	64	still	reduced	processed	recording	1	left to right	left	1511
1	65	mocap	reduced	text to speech	processed	2	right to left	left	517
1	66	still	reduced	text to speech	recording	1	left to right	right	5123
1	67	mocap	reduced	recording	text to speech	7	left to right	left	699
1	68	still	still	processed	recording	3	left to right	left	3714
1	69	reduced	reduced	processed	text to speech	8	right to left	left	517
1	70	mocap	still	processed	text to speech	2	right to left	left	632
1	71	reduced	mocap	recording	recording	8	right to left	right	3036
1	72	still	reduced	text to speech	text to speech	6	right to left	right	2571
1	73	mocap	still	text to speech	text to speech	2	right to left	left	517
1	74	mocap	mocap	recording	text to speech	6	right to left	left	964
1	75	still	still	text to speech	recording	3	left to right	right	4626
1	76	reduced	still	text to speech	text to speech	1	left to right	left	782
1	77	reduced	reduced	processed	recording	1	left to right	right	1627
1	78	still	mocap	recording	text to speech	4	right to left	left	2241
1	79	still	reduced	recording	processed	7	left to right	left	1080
1	80	reduced	reduced	text to speech	recording	1	left to right	right	1080
1	81	mocap	reduced	recording	recording	4	right to left	right	2919
1	82	still	reduced	processed	text to speech	6	right to left	left	948
1	83	mocap	mocap	text to speech	recording	7	left to right	right	1130
1	84	mocap	mocap	processed	recording	7	left to right	left	1345
1	85	still	reduced	recording	text to speech	5	left to right	left	567
1	86	mocap	mocap	text to speech	recording	8	right to left	left	8286
1	87	still	still	text to speech	recording	4	right to left	right	2339
1	88	reduced	mocap	processed	text to speech	3	left to right	left	1047
1	89	still	still	text to speech	processed	2	right to left	right	1113
1	90	mocap	mocap	recording	processed	7	left to right	left	1394
1	91	still	mocap	recording	recording	8	right to left	right	815
1	92	mocap	reduced	processed	recording	3	left to right	right	2356
1	93	still	reduced	text to speech	text to speech	5	left to right	left	566
1	94	reduced	reduced	processed	text to speech	7	left to right	left	616
1	95	reduced	reduced	processed	recording	2	right to left	left	865
1	96	still	reduced	text to speech	processed	7	left to right	left	517
1	97	mocap	still	processed	text to speech	1	left to right	left	438
1	98	reduced	still	recording	text to speech	2	right to left	left	682
1	99	mocap	reduced	recording	processed	1	left to right	left	3548
1	100	reduced	reduced	text to speech	recording	2	right to left	right	4625
1	101	reduced	still	text to speech	recording	5	left to right	right	865
1	102	reduced	still	recording	processed	3	left to right	right	2554
1	103	still	mocap	recording	processed	5	left to right	right	1047
1	104	reduced	still	recording	recording	5	left to right	right	749
1	105	still	still	recording	text to speech	1	left to right	left	1080
1	106	reduced	still	recording	text to speech	1	left to right	left	2637
1	107	still	mocap	text to speech	processed	5	left to right	right	517
1	108	mocap	still	recording	text to speech	1	left to right	left	517
1	109	reduced	mocap	processed	text to speech	4	right to left	left	881
1	110	mocap	still	processed	recording	6	right to left	left	1528
1	111	mocap	still	recording	processed	3	left to right	right	1726
1	112	mocap	mocap	recording	processed	8	right to left	left	2389
1	113	mocap	reduced	processed	processed	2	right to left	left	517
1	114	still	reduced	processed	processed	7	left to right	left	517
1	115	reduced	reduced	recording	text to speech	8	right to left	left	517
1	116	reduced	mocap	recording	text to speech	4	right to left	left	848
1	117	reduced	still	recording	processed	4	right to left	right	2554
1	118	reduced	reduced	recording	processed	1	left to right	right	2770
1	119	still	mocap	processed	text to speech	3	left to right	left	733

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
1	120	reduced	mocap	text to speech	processed	6	right to left	right	800
1	121	mocap	still	text to speech	recording	6	right to left	right	1908
1	122	mocap	reduced	recording	processed	2	right to left	right	683
1	123	still	still	recording	text to speech	2	right to left	left	1776
1	124	reduced	reduced	recording	processed	2	right to left	right	1345
1	125	reduced	mocap	text to speech	processed	5	left to right	right	4643
1	126	reduced	still	text to speech	recording	6	right to left	right	1445
1	127	still	still	processed	text to speech	2	right to left	left	2091
1	128	reduced	still	processed	text to speech	2	right to left	right	517
1	129	mocap	still	recording	recording	6	right to left	right	4179
1	130	mocap	still	recording	text to speech	2	right to left	left	517
1	131	still	reduced	processed	recording	2	right to left	left	1577
1	132	reduced	mocap	text to speech	text to speech	4	right to left	right	517
1	133	still	mocap	recording	recording	7	left to right	right	583
1	134	mocap	reduced	processed	recording	4	right to left	left	1891
1	135	reduced	still	processed	recording	5	left to right	left	1859
1	136	reduced	mocap	recording	recording	7	left to right	right	3366
1	137	still	still	text to speech	processed	1	left to right	right	750
1	138	still	mocap	text to speech	recording	8	right to left	right	3235
1	139	still	mocap	processed	recording	8	right to left	left	1130
1	140	still	still	processed	text to speech	1	left to right	left	3879
1	141	still	reduced	recording	recording	1	left to right	right	6315
1	142	reduced	still	processed	text to speech	1	left to right	left	517
1	143	reduced	reduced	recording	text to speech	7	left to right	left	1709
2	0	still	reduced	processed	text to speech	6	right to left	left	2622
2	1	still	reduced	processed	recording	2	right to left	left	1477
2	2	mocap	mocap	processed	text to speech	6	right to left	left	1396
2	3	still	mocap	recording	recording	8	right to left	right	1229
2	4	still	reduced	recording	text to speech	5	left to right	left	1163
2	5	mocap	reduced	processed	recording	3	left to right	right	6249
2	6	still	reduced	processed	recording	1	left to right	right	1263
2	7	still	reduced	text to speech	text to speech	5	left to right	left	1362
2	8	mocap	still	recording	recording	5	left to right	left	699
2	9	still	still	text to speech	processed	2	right to left	right	1246
2	10	mocap	still	recording	text to speech	1	left to right	left	1842
2	11	mocap	still	text to speech	processed	3	left to right	left	931
2	12	reduced	reduced	text to speech	processed	8	right to left	right	799
2	13	mocap	reduced	recording	processed	2	right to left	left	1395
2	14	mocap	mocap	processed	recording	8	right to left	right	521
2	15	still	still	text to speech	recording	3	left to right	right	1362
2	16	reduced	reduced	recording	text to speech	8	right to left	left	517
2	17	mocap	reduced	processed	text to speech	8	right to left	left	11255
2	18	mocap	still	processed	recording	6	right to left	left	11190
2	19	mocap	still	text to speech	text to speech	2	right to left	right	1743
2	20	still	reduced	recording	text to speech	6	right to left	left	1013
2	21	still	reduced	recording	recording	1	left to right	right	517
2	22	reduced	mocap	processed	text to speech	4	right to left	left	881
2	23	mocap	still	recording	processed	3	left to right	left	2107
2	24	reduced	mocap	text to speech	recording	8	right to left	right	518
2	25	mocap	reduced	processed	recording	4	right to left	right	666
2	26	still	still	recording	processed	3	left to right	left	517
2	27	still	reduced	text to speech	processed	8	right to left	left	1147
2	28	reduced	mocap	recording	text to speech	3	left to right	left	517
2	29	reduced	mocap	processed	recording	7	left to right	right	1013
2	30	still	reduced	text to speech	processed	7	left to right	right	980
2	31	still	mocap	text to speech	text to speech	3	left to right	left	518
2	32	reduced	mocap	recording	processed	6	right to left	right	1047
2	33	mocap	reduced	processed	processed	2	right to left	left	882
2	34	still	reduced	recording	processed	7	left to right	left	2869
2	35	mocap	mocap	recording	processed	7	left to right	left	405

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
2	36	mocap	mocap	recording	processed	8	right to left	left	914
2	37	reduced	still	recording	text to speech	1	left to right	left	2935
2	38	still	mocap	text to speech	text to speech	4	right to left	right	882
2	39	mocap	reduced	text to speech	text to speech	7	left to right	right	2670
2	40	still	still	text to speech	processed	1	left to right	left	518
2	41	reduced	still	recording	processed	4	right to left	left	915
2	42	still	mocap	processed	processed	6	right to left	left	1030
2	43	still	still	processed	text to speech	2	right to left	left	931
2	44	still	mocap	processed	text to speech	4	right to left	left	1063
2	45	still	mocap	recording	processed	5	left to right	left	2190
2	46	mocap	still	text to speech	processed	4	right to left	right	1032
2	47	mocap	mocap	text to speech	recording	7	left to right	right	914
2	48	still	mocap	text to speech	recording	8	right to left	right	914
2	49	mocap	mocap	recording	text to speech	6	right to left	left	533
2	50	mocap	reduced	text to speech	processed	2	right to left	right	517
2	51	still	mocap	processed	recording	7	left to right	left	749
2	52	reduced	still	processed	recording	5	left to right	right	1229
2	53	still	mocap	processed	text to speech	3	left to right	left	1046
2	54	reduced	still	text to speech	text to speech	2	right to left	right	190
2	55	mocap	reduced	recording	text to speech	8	right to left	left	1114
2	56	reduced	reduced	processed	recording	2	right to left	left	517
2	57	mocap	reduced	text to speech	processed	1	left to right	left	1014
2	58	mocap	reduced	text to speech	recording	4	right to left	left	865
2	59	mocap	still	recording	text to speech	2	right to left	left	1014
2	60	still	still	recording	text to speech	1	left to right	left	1013
2	61	mocap	still	recording	recording	6	right to left	right	1279
2	62	mocap	reduced	text to speech	text to speech	8	right to left	left	617
2	63	mocap	reduced	processed	text to speech	7	left to right	left	650
2	64	reduced	reduced	recording	text to speech	7	left to right	left	1031
2	65	still	mocap	text to speech	processed	6	right to left	right	732
2	66	reduced	reduced	recording	processed	2	right to left	left	583
2	67	reduced	mocap	text to speech	processed	5	left to right	left	3250
2	68	reduced	reduced	text to speech	processed	7	left to right	right	517
2	69	reduced	reduced	text to speech	recording	1	left to right	right	699
2	70	reduced	still	processed	text to speech	1	left to right	right	964
2	71	still	still	processed	text to speech	1	left to right	left	517
2	72	still	still	processed	recording	4	right to left	right	2406
2	73	reduced	mocap	recording	recording	8	right to left	left	1080
2	74	reduced	reduced	processed	text to speech	8	right to left	left	948
2	75	reduced	reduced	processed	recording	1	left to right	right	517
2	76	reduced	mocap	recording	processed	5	left to right	left	517
2	77	mocap	mocap	text to speech	processed	6	right to left	left	1047
2	78	reduced	mocap	processed	recording	8	right to left	right	948
2	79	still	mocap	recording	recording	7	left to right	left	517
2	80	still	reduced	processed	processed	8	right to left	right	932
2	81	reduced	reduced	recording	processed	1	left to right	left	1097
2	82	reduced	still	processed	recording	6	right to left	right	517
2	83	mocap	mocap	text to speech	processed	5	left to right	right	616
2	84	reduced	mocap	recording	text to speech	4	right to left	left	699
2	85	still	reduced	text to speech	recording	2	right to left	right	520
2	86	still	mocap	recording	text to speech	3	left to right	left	4078
2	87	reduced	still	recording	text to speech	2	right to left	left	1187
2	88	reduced	mocap	recording	recording	7	left to right	left	999
2	89	mocap	reduced	recording	text to speech	7	left to right	left	517
2	90	still	reduced	text to speech	recording	1	left to right	right	1428
2	91	reduced	mocap	text to speech	processed	6	right to left	right	1014
2	92	reduced	mocap	processed	processed	5	left to right	right	848
2	93	still	reduced	processed	processed	7	left to right	left	1743
2	94	still	reduced	recording	recording	2	right to left	left	517
2	95	reduced	still	processed	text to speech	2	right to left	right	898

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
2	96	reduced	mocap	text to speech	recording	7	left to right	right	1196
2	97	mocap	still	text to speech	text to speech	1	left to right	left	1096
2	98	mocap	mocap	processed	recording	7	left to right	right	517
2	99	still	reduced	recording	processed	8	right to left	left	798
2	100	mocap	still	recording	processed	4	right to left	left	798
2	101	reduced	mocap	processed	processed	6	right to left	right	947
2	102	mocap	reduced	processed	processed	1	left to right	left	931
2	103	mocap	mocap	text to speech	recording	8	right to left	right	882
2	104	mocap	reduced	text to speech	recording	3	left to right	right	1677
2	105	still	still	text to speech	recording	4	right to left	right	1014
2	106	mocap	still	processed	text to speech	1	left to right	left	1080
2	107	mocap	still	text to speech	recording	5	left to right	right	617
2	108	still	still	processed	recording	3	left to right	right	964
2	109	reduced	still	text to speech	recording	6	right to left	right	1014
2	110	reduced	still	recording	processed	3	left to right	left	947
2	111	reduced	mocap	text to speech	text to speech	4	right to left	right	1262
2	112	reduced	reduced	text to speech	recording	2	right to left	right	518
2	113	mocap	mocap	recording	text to speech	5	left to right	left	981
2	114	reduced	still	recording	recording	6	right to left	right	1080
2	115	still	mocap	processed	processed	5	left to right	right	567
2	116	still	still	recording	processed	4	right to left	left	1709
2	117	reduced	still	text to speech	processed	3	left to right	left	715
2	118	reduced	reduced	processed	text to speech	7	left to right	left	11588
2	119	still	mocap	text to speech	recording	7	left to right	right	1909
2	120	reduced	still	text to speech	processed	4	right to left	right	931
2	121	reduced	still	text to speech	text to speech	1	left to right	right	1129
2	122	reduced	still	processed	processed	4	right to left	right	898
2	123	mocap	reduced	recording	processed	1	left to right	left	815
2	124	still	reduced	text to speech	text to speech	6	right to left	left	799
2	125	still	mocap	recording	text to speech	4	right to left	right	520
2	126	mocap	still	processed	processed	4	right to left	left	2704
2	127	mocap	still	processed	recording	5	left to right	right	848
2	128	mocap	still	processed	text to speech	2	right to left	left	1030
2	129	still	mocap	processed	recording	8	right to left	right	521
2	130	still	mocap	recording	processed	6	right to left	left	1030
2	131	mocap	still	text to speech	recording	6	right to left	right	518
2	132	reduced	mocap	text to speech	text to speech	3	left to right	left	517
2	133	still	mocap	text to speech	processed	5	left to right	right	600
2	134	mocap	reduced	recording	recording	3	left to right	left	981
2	135	mocap	still	processed	processed	3	left to right	left	1743
2	136	reduced	mocap	processed	text to speech	3	left to right	left	915
2	137	reduced	still	text to speech	recording	5	left to right	right	980
2	138	still	reduced	processed	text to speech	5	left to right	left	948
2	139	mocap	mocap	processed	text to speech	5	left to right	left	931
2	140	reduced	still	recording	recording	5	left to right	right	699
2	141	still	still	recording	text to speech	2	right to left	left	898
2	142	reduced	still	processed	processed	3	left to right	right	567
2	143	mocap	reduced	recording	recording	4	right to left	right	517
3	0	reduced	mocap	processed	recording	8	right to left	right	518
3	1	reduced	mocap	text to speech	processed	5	left to right	left	1643
3	2	mocap	still	text to speech	processed	4	right to left	left	1113
3	3	mocap	mocap	processed	recording	7	left to right	right	517
3	4	still	mocap	recording	processed	6	right to left	left	815
3	5	mocap	mocap	text to speech	processed	5	left to right	left	1245
3	6	still	reduced	recording	recording	2	right to left	right	5072
3	7	reduced	mocap	recording	recording	7	left to right	right	716
3	8	mocap	mocap	processed	recording	8	right to left	left	848
3	9	mocap	mocap	text to speech	recording	7	left to right	right	1014
3	10	still	still	recording	processed	3	left to right	left	518
3	11	reduced	reduced	processed	text to speech	8	right to left	left	11220

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
3	12	mocap	reduced	recording	recording	3	left to right	right	1180
3	13	mocap	reduced	text to speech	processed	2	right to left	right	1064
3	14	still	reduced	text to speech	recording	2	right to left	right	518
3	15	reduced	reduced	text to speech	processed	7	left to right	right	1229
3	16	reduced	mocap	processed	processed	5	left to right	right	716
3	17	reduced	reduced	processed	recording	2	right to left	right	1213
3	18	reduced	still	processed	processed	3	left to right	left	2920
3	19	still	mocap	text to speech	text to speech	4	right to left	right	2769
3	20	reduced	mocap	processed	text to speech	3	left to right	left	1047
3	21	reduced	reduced	recording	processed	1	left to right	left	1098
3	22	still	mocap	text to speech	processed	6	right to left	right	1229
3	23	reduced	reduced	recording	text to speech	7	left to right	left	1146
3	24	still	mocap	recording	text to speech	4	right to left	right	1180
3	25	still	mocap	recording	recording	8	right to left	right	1064
3	26	mocap	still	recording	recording	5	left to right	left	1113
3	27	still	mocap	processed	recording	7	left to right	right	914
3	28	mocap	reduced	recording	processed	2	right to left	left	981
3	29	reduced	mocap	recording	text to speech	4	right to left	left	1064
3	30	mocap	mocap	recording	text to speech	6	right to left	right	832
3	31	reduced	mocap	processed	processed	6	right to left	left	1014
3	32	reduced	still	recording	text to speech	1	left to right	left	1097
3	33	mocap	still	text to speech	text to speech	2	right to left	left	1212
3	34	mocap	still	recording	processed	4	right to left	left	1213
3	35	still	still	recording	text to speech	1	left to right	left	3664
3	36	still	still	processed	text to speech	2	right to left	right	517
3	37	still	still	recording	processed	4	right to left	left	1015
3	38	still	mocap	processed	text to speech	3	left to right	right	1213
3	39	mocap	still	processed	processed	4	right to left	left	1081
3	40	mocap	still	recording	text to speech	1	left to right	left	1229
3	41	reduced	reduced	text to speech	processed	8	right to left	left	998
3	42	mocap	still	recording	processed	3	left to right	left	1263
3	43	still	mocap	text to speech	recording	7	left to right	right	1048
3	44	still	still	text to speech	recording	3	left to right	right	1047
3	45	still	mocap	recording	processed	5	left to right	right	517
3	46	reduced	reduced	text to speech	recording	2	right to left	right	881
3	47	still	mocap	processed	text to speech	4	right to left	right	1163
3	48	mocap	reduced	processed	recording	4	right to left	left	1130
3	49	mocap	still	text to speech	processed	3	left to right	left	1229
3	50	reduced	reduced	processed	text to speech	7	left to right	right	1312
3	51	reduced	still	processed	text to speech	1	left to right	left	1196
3	52	reduced	reduced	recording	text to speech	8	right to left	right	1843
3	53	reduced	mocap	recording	processed	5	left to right	right	1230
3	54	still	still	text to speech	recording	4	right to left	right	1065
3	55	reduced	mocap	text to speech	recording	8	right to left	right	981
3	56	still	reduced	processed	recording	1	left to right	right	997
3	57	still	reduced	recording	text to speech	5	left to right	right	1096
3	58	mocap	reduced	text to speech	recording	4	right to left	left	1676
3	59	reduced	still	recording	processed	3	left to right	left	1312
3	60	reduced	still	recording	text to speech	2	right to left	left	2886
3	61	reduced	still	text to speech	text to speech	1	left to right	left	2273
3	62	reduced	still	text to speech	recording	6	right to left	left	1047
3	63	reduced	still	text to speech	processed	3	left to right	right	1594
3	64	mocap	still	recording	text to speech	2	right to left	left	1065
3	65	mocap	still	text to speech	text to speech	1	left to right	left	1163
3	66	still	reduced	recording	recording	1	left to right	right	1047
3	67	mocap	still	processed	text to speech	1	left to right	left	964
3	68	still	reduced	processed	processed	8	right to left	right	1097
3	69	mocap	reduced	processed	recording	3	left to right	right	1247
3	70	still	mocap	text to speech	text to speech	3	left to right	right	964
3	71	reduced	mocap	processed	recording	7	left to right	right	898

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
3	72	reduced	still	text to speech	recording	5	left to right	left	1013
3	73	reduced	reduced	processed	recording	1	left to right	right	1461
3	74	still	reduced	recording	processed	7	left to right	right	1363
3	75	reduced	mocap	text to speech	recording	7	left to right	left	1065
3	76	still	still	text to speech	processed	2	right to left	right	1013
3	77	reduced	mocap	text to speech	text to speech	3	left to right	right	1096
3	78	still	mocap	text to speech	processed	5	left to right	right	931
3	79	still	mocap	text to speech	recording	8	right to left	right	1131
3	80	still	still	processed	text to speech	1	left to right	right	864
3	81	mocap	reduced	text to speech	text to speech	7	left to right	left	1046
3	82	still	reduced	text to speech	text to speech	5	left to right	right	1031
3	83	still	reduced	processed	text to speech	6	right to left	right	1113
3	84	reduced	still	recording	processed	4	right to left	left	1378
3	85	mocap	mocap	recording	processed	7	left to right	left	1379
3	86	still	still	text to speech	processed	1	left to right	left	981
3	87	mocap	reduced	recording	text to speech	7	left to right	left	865
3	88	still	reduced	processed	processed	7	left to right	right	815
3	89	mocap	reduced	recording	recording	4	right to left	right	1295
3	90	mocap	mocap	recording	text to speech	5	left to right	right	866
3	91	still	reduced	recording	text to speech	6	right to left	right	1212
3	92	mocap	mocap	processed	text to speech	5	left to right	right	848
3	93	still	still	recording	text to speech	2	right to left	right	1080
3	94	reduced	mocap	recording	text to speech	3	left to right	left	1411
3	95	reduced	mocap	processed	text to speech	4	right to left	left	1892
3	96	reduced	mocap	recording	processed	6	right to left	right	2521
3	97	still	still	processed	recording	4	right to left	right	765
3	98	mocap	mocap	text to speech	recording	8	right to left	left	998
3	99	mocap	still	text to speech	recording	5	left to right	left	568
3	100	reduced	still	recording	recording	5	left to right	left	1544
3	101	reduced	still	processed	processed	4	right to left	left	914
3	102	mocap	still	text to speech	recording	6	right to left	left	1097
3	103	mocap	reduced	processed	processed	2	right to left	right	898
3	104	still	reduced	recording	processed	8	right to left	right	1163
3	105	reduced	still	text to speech	text to speech	2	right to left	left	815
3	106	mocap	still	processed	recording	6	right to left	left	1279
3	107	still	still	processed	recording	3	left to right	right	865
3	108	reduced	mocap	recording	recording	8	right to left	left	517
3	109	reduced	reduced	recording	processed	2	right to left	left	1096
3	110	still	reduced	text to speech	text to speech	6	right to left	right	1196
3	111	reduced	still	processed	recording	5	left to right	left	832
3	112	mocap	reduced	recording	processed	1	left to right	right	1014
3	113	mocap	mocap	recording	processed	8	right to left	right	1014
3	114	mocap	reduced	processed	text to speech	8	right to left	left	914
3	115	reduced	still	processed	recording	6	right to left	left	981
3	116	still	mocap	processed	recording	8	right to left	right	931
3	117	mocap	reduced	text to speech	text to speech	8	right to left	left	1147
3	118	still	mocap	processed	processed	5	left to right	right	1610
3	119	mocap	reduced	recording	text to speech	8	right to left	left	8485
3	120	reduced	reduced	text to speech	recording	1	left to right	right	1560
3	121	still	reduced	processed	text to speech	5	left to right	right	898
3	122	still	mocap	recording	recording	7	left to right	right	1146
3	123	still	mocap	recording	text to speech	3	left to right	right	1262
3	124	reduced	still	recording	recording	6	right to left	left	1146
3	125	reduced	still	text to speech	processed	4	right to left	left	1246
3	126	mocap	mocap	processed	text to speech	6	right to left	right	997
3	127	mocap	reduced	text to speech	recording	3	left to right	right	898
3	128	still	reduced	text to speech	processed	7	left to right	right	997
3	129	mocap	mocap	text to speech	processed	6	right to left	left	832
3	130	still	reduced	text to speech	processed	8	right to left	right	1346
3	131	reduced	still	processed	text to speech	2	right to left	left	883

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
3	132	still	reduced	text to speech	recording	1	left to right	right	865
3	133	mocap	still	processed	recording	5	left to right	left	1047
3	134	mocap	reduced	processed	processed	1	left to right	right	848
3	135	mocap	reduced	processed	text to speech	7	left to right	left	865
3	136	reduced	mocap	text to speech	processed	6	right to left	right	799
3	137	mocap	still	recording	recording	6	right to left	left	798
3	138	mocap	still	processed	processed	3	left to right	left	848
3	139	still	reduced	processed	recording	2	right to left	right	1195
3	140	mocap	reduced	text to speech	processed	1	left to right	right	832
3	141	reduced	mocap	text to speech	text to speech	4	right to left	left	981
3	142	still	mocap	processed	processed	6	right to left	right	848
3	143	mocap	still	processed	text to speech	2	right to left	left	1114
4	0	still	mocap	recording	processed	6	right to left	right	1412
4	1	mocap	reduced	recording	recording	3	left to right	left	1478
4	2	reduced	still	text to speech	text to speech	2	right to left	right	3068
4	3	mocap	still	recording	recording	5	left to right	right	6497
4	4	reduced	mocap	recording	processed	6	right to left	right	518
4	5	mocap	still	processed	processed	4	right to left	right	1461
4	6	mocap	still	recording	text to speech	2	right to left	left	2191
4	7	still	reduced	processed	text to speech	5	left to right	left	1014
4	8	reduced	still	processed	text to speech	1	left to right	left	1080
4	9	mocap	reduced	processed	processed	1	left to right	left	3333
4	10	reduced	reduced	text to speech	processed	8	right to left	right	898
4	11	reduced	mocap	text to speech	recording	7	left to right	right	1113
4	12	reduced	still	text to speech	processed	3	left to right	right	1047
4	13	reduced	still	recording	text to speech	1	left to right	left	1279
4	14	still	mocap	text to speech	text to speech	3	left to right	left	1163
4	15	mocap	still	processed	recording	5	left to right	left	914
4	16	still	reduced	processed	recording	1	left to right	left	1113
4	17	reduced	still	processed	processed	4	right to left	right	1096
4	18	reduced	mocap	processed	text to speech	4	right to left	right	1180
4	19	still	mocap	recording	recording	8	right to left	right	1015
4	20	reduced	mocap	processed	processed	5	left to right	left	2588
4	21	still	reduced	processed	processed	7	left to right	right	1629
4	22	reduced	still	recording	text to speech	2	right to left	right	1014
4	23	mocap	reduced	processed	processed	2	right to left	left	1212
4	24	still	reduced	recording	recording	1	left to right	right	1229
4	25	mocap	mocap	processed	text to speech	5	left to right	left	1196
4	26	mocap	reduced	recording	text to speech	8	right to left	left	998
4	27	reduced	reduced	text to speech	recording	2	right to left	right	1213
4	28	still	mocap	processed	processed	5	left to right	left	2024
4	29	still	still	text to speech	recording	4	right to left	right	1014
4	30	mocap	mocap	processed	recording	8	right to left	right	1063
4	31	mocap	still	processed	text to speech	1	left to right	left	1031
4	32	mocap	reduced	processed	text to speech	7	left to right	left	882
4	33	mocap	mocap	text to speech	recording	7	left to right	right	948
4	34	mocap	still	text to speech	text to speech	1	left to right	left	4128
4	35	reduced	reduced	processed	recording	2	right to left	right	997
4	36	reduced	reduced	recording	text to speech	8	right to left	right	948
4	37	mocap	still	recording	text to speech	1	left to right	left	1015
4	38	still	mocap	text to speech	processed	5	left to right	right	964
4	39	still	still	text to speech	processed	1	left to right	right	947
4	40	reduced	still	processed	text to speech	2	right to left	left	1163
4	41	reduced	still	text to speech	processed	4	right to left	right	981
4	42	mocap	mocap	recording	processed	8	right to left	left	1627
4	43	still	mocap	text to speech	text to speech	4	right to left	right	948
4	44	still	still	processed	text to speech	1	left to right	left	1180
4	45	reduced	still	text to speech	text to speech	1	left to right	right	1031
4	46	mocap	still	text to speech	recording	5	left to right	right	1014
4	47	mocap	reduced	text to speech	processed	2	right to left	right	882

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
4	48	still	mocap	processed	text to speech	4	right to left	right	881
4	49	mocap	still	text to speech	processed	3	left to right	right	1180
4	50	still	still	processed	recording	4	right to left	right	5206
4	51	reduced	reduced	recording	processed	2	right to left	right	517
4	52	reduced	mocap	text to speech	recording	8	right to left	right	964
4	53	mocap	still	processed	processed	3	left to right	left	1213
4	54	reduced	reduced	processed	text to speech	8	right to left	left	881
4	55	still	still	processed	text to speech	2	right to left	left	1345
4	56	still	mocap	processed	recording	8	right to left	right	964
4	57	mocap	reduced	processed	text to speech	8	right to left	left	1047
4	58	still	reduced	text to speech	recording	2	right to left	right	1246
4	59	mocap	still	processed	recording	6	right to left	right	3102
4	60	reduced	mocap	recording	text to speech	4	right to left	right	997
4	61	reduced	reduced	recording	processed	1	left to right	left	1395
4	62	mocap	reduced	recording	processed	1	left to right	left	1229
4	63	still	mocap	processed	text to speech	3	left to right	left	1212
4	64	still	still	processed	recording	3	left to right	right	1428
4	65	still	still	text to speech	recording	3	left to right	right	964
4	66	mocap	still	processed	text to speech	2	right to left	left	1179
4	67	reduced	mocap	recording	recording	8	right to left	right	1229
4	68	still	mocap	recording	recording	7	left to right	left	2090
4	69	reduced	still	processed	recording	6	right to left	right	1096
4	70	mocap	still	recording	recording	6	right to left	right	1230
4	71	mocap	mocap	recording	text to speech	5	left to right	left	1047
4	72	mocap	reduced	recording	text to speech	7	left to right	left	864
4	73	mocap	reduced	processed	recording	4	right to left	left	1047
4	74	reduced	mocap	processed	recording	8	right to left	right	932
4	75	reduced	still	recording	processed	3	left to right	right	981
4	76	still	mocap	recording	text to speech	4	right to left	right	1626
4	77	reduced	still	text to speech	recording	6	right to left	left	4608
4	78	still	reduced	text to speech	processed	7	left to right	right	881
4	79	reduced	still	text to speech	recording	5	left to right	left	1179
4	80	reduced	still	recording	recording	6	right to left	left	914
4	81	still	still	recording	text to speech	2	right to left	left	947
4	82	reduced	reduced	processed	text to speech	7	left to right	left	881
4	83	reduced	mocap	recording	recording	7	left to right	right	4759
4	84	still	mocap	processed	processed	6	right to left	right	1081
4	85	reduced	reduced	recording	text to speech	7	left to right	left	1163
4	86	mocap	still	recording	processed	3	left to right	left	1709
4	87	still	mocap	processed	recording	7	left to right	right	948
4	88	still	reduced	recording	text to speech	5	left to right	left	948
4	89	reduced	mocap	recording	processed	5	left to right	left	1196
4	90	reduced	mocap	processed	text to speech	3	left to right	left	881
4	91	mocap	mocap	text to speech	processed	6	right to left	right	881
4	92	still	mocap	text to speech	recording	8	right to left	right	898
4	93	mocap	still	text to speech	processed	4	right to left	left	1245
4	94	mocap	mocap	text to speech	recording	8	right to left	right	881
4	95	mocap	still	text to speech	text to speech	2	right to left	left	981
4	96	still	reduced	recording	processed	8	right to left	right	881
4	97	still	still	recording	text to speech	1	left to right	left	881
4	98	reduced	reduced	processed	recording	1	left to right	left	2173
4	99	still	reduced	text to speech	text to speech	5	left to right	left	1212
4	100	reduced	mocap	text to speech	processed	5	left to right	right	916
4	101	reduced	mocap	text to speech	processed	6	right to left	right	998
4	102	still	reduced	recording	text to speech	6	right to left	left	914
4	103	mocap	mocap	text to speech	processed	5	left to right	right	898
4	104	still	mocap	recording	processed	5	left to right	right	897
4	105	mocap	reduced	recording	processed	2	right to left	right	981
4	106	still	reduced	processed	processed	8	right to left	right	882
4	107	still	reduced	text to speech	processed	8	right to left	right	1047

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
4	108	mocap	still	text to speech	recording	6	right to left	right	998
4	109	mocap	mocap	processed	text to speech	6	right to left	right	1941
4	110	mocap	reduced	processed	recording	3	left to right	left	914
4	111	still	reduced	recording	recording	2	right to left	right	947
4	112	still	mocap	text to speech	recording	7	left to right	right	964
4	113	still	still	text to speech	processed	2	right to left	right	1014
4	114	reduced	reduced	text to speech	processed	7	left to right	right	898
4	115	mocap	reduced	text to speech	recording	4	right to left	left	964
4	116	still	mocap	recording	text to speech	3	left to right	left	964
4	117	reduced	mocap	text to speech	text to speech	3	left to right	right	1859
4	118	reduced	mocap	recording	text to speech	3	left to right	right	897
4	119	reduced	still	recording	processed	4	right to left	right	1146
4	120	still	reduced	processed	recording	2	right to left	right	915
4	121	mocap	mocap	recording	text to speech	6	right to left	right	997
4	122	mocap	reduced	text to speech	recording	3	left to right	right	1163
4	123	mocap	reduced	text to speech	text to speech	8	right to left	left	999
4	124	still	reduced	text to speech	text to speech	6	right to left	right	898
4	125	still	still	recording	processed	4	right to left	right	1179
4	126	reduced	still	processed	processed	3	left to right	left	882
4	127	mocap	reduced	text to speech	processed	1	left to right	right	881
4	128	mocap	still	recording	processed	4	right to left	left	898
4	129	reduced	reduced	text to speech	recording	1	left to right	right	782
4	130	mocap	mocap	processed	recording	7	left to right	left	1080
4	131	still	reduced	processed	text to speech	6	right to left	left	948
4	132	mocap	reduced	recording	recording	4	right to left	right	964
4	133	reduced	mocap	text to speech	text to speech	4	right to left	right	1179
4	134	reduced	still	recording	recording	5	left to right	left	882
4	135	still	still	recording	processed	3	left to right	left	1328
4	136	reduced	still	processed	recording	5	left to right	left	881
4	137	still	reduced	text to speech	recording	1	left to right	right	881
4	138	reduced	mocap	processed	recording	7	left to right	left	1378
4	139	still	reduced	recording	processed	7	left to right	right	865
4	140	still	mocap	text to speech	processed	6	right to left	right	914
4	141	mocap	mocap	recording	processed	7	left to right	right	1065
4	142	mocap	reduced	text to speech	text to speech	7	left to right	left	964
4	143	reduced	mocap	processed	processed	6	right to left	right	799
5	0	reduced	still	text to speech	recording	6	right to left	right	518
5	1	still	still	recording	text to speech	2	right to left	left	1179
5	2	mocap	mocap	recording	processed	8	right to left	left	518
5	3	mocap	still	processed	text to speech	1	left to right	left	517
5	4	reduced	still	recording	text to speech	1	left to right	left	964
5	5	reduced	mocap	recording	recording	8	right to left	right	3267
5	6	reduced	still	recording	recording	5	left to right	left	517
5	7	mocap	reduced	text to speech	processed	2	right to left	right	517
5	8	mocap	reduced	recording	recording	4	right to left	left	666
5	9	reduced	still	recording	recording	6	right to left	right	521
5	10	reduced	still	recording	text to speech	2	right to left	left	517
5	11	mocap	mocap	processed	text to speech	6	right to left	left	517
5	12	still	reduced	processed	processed	7	left to right	right	517
5	13	still	reduced	text to speech	processed	8	right to left	right	599
5	14	reduced	mocap	processed	text to speech	3	left to right	right	1875
5	15	mocap	still	text to speech	text to speech	2	right to left	left	517
5	16	reduced	mocap	processed	text to speech	4	right to left	right	3035
5	17	mocap	reduced	text to speech	text to speech	7	left to right	right	583
5	18	mocap	still	text to speech	processed	3	left to right	left	699
5	19	reduced	still	processed	processed	4	right to left	left	665
5	20	mocap	reduced	processed	recording	4	right to left	left	1461
5	21	reduced	reduced	text to speech	recording	2	right to left	right	517
5	22	still	mocap	processed	recording	8	right to left	right	1742
5	23	reduced	reduced	processed	text to speech	8	right to left	left	517

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
5	24	still	reduced	text to speech	processed	7	left to right	right	517
5	25	reduced	mocap	recording	text to speech	3	left to right	right	2521
5	26	still	mocap	text to speech	text to speech	4	right to left	right	1297
5	27	still	reduced	text to speech	text to speech	5	left to right	right	517
5	28	reduced	still	processed	text to speech	2	right to left	right	1660
5	29	mocap	reduced	processed	processed	2	right to left	left	1080
5	30	reduced	reduced	text to speech	recording	1	left to right	right	519
5	31	still	mocap	processed	processed	6	right to left	right	682
5	32	still	mocap	recording	text to speech	4	right to left	right	583
5	33	mocap	still	processed	text to speech	2	right to left	left	517
5	34	mocap	reduced	processed	recording	3	left to right	left	2057
5	35	reduced	reduced	recording	processed	2	right to left	left	566
5	36	mocap	mocap	recording	processed	7	left to right	right	517
5	37	mocap	reduced	processed	processed	1	left to right	right	517
5	38	reduced	reduced	recording	text to speech	8	right to left	right	616
5	39	still	mocap	text to speech	processed	6	right to left	right	1444
5	40	mocap	mocap	text to speech	recording	8	right to left	right	190
5	41	reduced	mocap	recording	text to speech	4	right to left	right	1727
5	42	mocap	still	processed	recording	5	left to right	left	517
5	43	reduced	mocap	recording	processed	6	right to left	left	964
5	44	reduced	mocap	text to speech	text to speech	4	right to left	right	518
5	45	mocap	still	processed	processed	4	right to left	left	566
5	46	still	mocap	processed	text to speech	3	left to right	right	583
5	47	still	still	text to speech	recording	3	left to right	left	931
5	48	still	reduced	processed	text to speech	5	left to right	right	517
5	49	mocap	still	text to speech	processed	4	right to left	left	815
5	50	mocap	still	text to speech	text to speech	1	left to right	left	2026
5	51	still	reduced	recording	text to speech	6	right to left	left	517
5	52	still	mocap	recording	processed	6	right to left	right	517
5	53	still	reduced	processed	processed	8	right to left	right	1660
5	54	reduced	mocap	processed	processed	6	right to left	right	2157
5	55	still	reduced	recording	processed	7	left to right	right	1560
5	56	mocap	reduced	text to speech	processed	1	left to right	right	518
5	57	still	still	processed	text to speech	2	right to left	right	666
5	58	still	mocap	processed	processed	5	left to right	right	1875
5	59	mocap	still	text to speech	recording	6	right to left	right	517
5	60	reduced	still	text to speech	processed	3	left to right	right	518
5	61	mocap	still	recording	processed	3	left to right	right	14847
5	62	reduced	mocap	text to speech	processed	5	left to right	right	518
5	63	still	still	processed	recording	3	left to right	left	533
5	64	mocap	still	recording	text to speech	1	left to right	left	633
5	65	still	mocap	recording	processed	5	left to right	right	517
5	66	still	reduced	text to speech	recording	1	left to right	right	781
5	67	still	mocap	recording	recording	8	right to left	right	1743
5	68	mocap	still	processed	processed	3	left to right	left	517
5	69	still	mocap	recording	recording	7	left to right	right	517
5	70	still	reduced	recording	recording	2	right to left	right	1726
5	71	reduced	still	recording	processed	4	right to left	left	517
5	72	mocap	still	recording	recording	5	left to right	left	1859
5	73	mocap	reduced	recording	recording	3	left to right	right	517
5	74	reduced	still	text to speech	processed	4	right to left	right	599
5	75	still	still	recording	text to speech	1	left to right	left	765
5	76	reduced	mocap	text to speech	recording	8	right to left	right	616
5	77	mocap	reduced	text to speech	recording	4	right to left	right	517
5	78	mocap	reduced	recording	text to speech	7	left to right	left	782
5	79	reduced	reduced	text to speech	processed	7	left to right	right	1511
5	80	reduced	mocap	recording	recording	7	left to right	right	517
5	81	still	mocap	text to speech	text to speech	3	left to right	right	1411
5	82	reduced	reduced	processed	recording	1	left to right	right	517
5	83	still	mocap	processed	recording	7	left to right	right	438

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
5	84	mocap	reduced	text to speech	text to speech	8	right to left	left	2190
5	85	still	still	recording	processed	3	left to right	left	533
5	86	reduced	still	text to speech	recording	5	left to right	left	1826
5	87	reduced	still	recording	processed	3	left to right	left	898
5	88	mocap	reduced	recording	text to speech	8	right to left	right	1544
5	89	still	reduced	processed	text to speech	6	right to left	right	517
5	90	reduced	mocap	processed	processed	5	left to right	right	1462
5	91	reduced	mocap	processed	recording	8	right to left	right	1130
5	92	still	still	text to speech	recording	4	right to left	right	518
5	93	still	reduced	processed	recording	2	right to left	right	517
5	94	reduced	mocap	text to speech	text to speech	3	left to right	right	2307
5	95	still	mocap	text to speech	recording	8	right to left	right	1031
5	96	reduced	mocap	processed	recording	7	left to right	right	533
5	97	reduced	mocap	recording	processed	5	left to right	right	732
5	98	mocap	reduced	processed	text to speech	7	left to right	left	882
5	99	mocap	mocap	recording	text to speech	5	left to right	right	2985
5	100	reduced	reduced	processed	text to speech	7	left to right	left	1329
5	101	mocap	reduced	text to speech	recording	3	left to right	left	517
5	102	reduced	still	text to speech	text to speech	2	right to left	right	1841
5	103	reduced	mocap	text to speech	processed	6	right to left	left	517
5	104	still	reduced	text to speech	recording	2	right to left	right	1975
5	105	mocap	mocap	text to speech	processed	5	left to right	right	517
5	106	still	mocap	text to speech	recording	7	left to right	right	616
5	107	mocap	mocap	processed	recording	8	right to left	right	633
5	108	still	mocap	recording	text to speech	3	left to right	left	1295
5	109	reduced	mocap	text to speech	recording	7	left to right	right	616
5	110	still	reduced	recording	recording	1	left to right	right	649
5	111	mocap	still	text to speech	recording	5	left to right	right	4311
5	112	reduced	still	text to speech	text to speech	1	left to right	left	517
5	113	still	reduced	recording	processed	8	right to left	right	616
5	114	reduced	still	processed	recording	6	right to left	right	848
5	115	reduced	still	processed	text to speech	1	left to right	left	601
5	116	still	still	recording	processed	4	right to left	right	599
5	117	reduced	still	processed	processed	3	left to right	left	1063
5	118	still	mocap	processed	text to speech	4	right to left	right	1130
5	119	reduced	reduced	recording	text to speech	7	left to right	left	3135
5	120	mocap	mocap	text to speech	recording	7	left to right	right	2174
5	121	mocap	still	recording	text to speech	2	right to left	right	518
5	122	mocap	still	recording	processed	4	right to left	left	865
5	123	reduced	reduced	recording	processed	1	left to right	left	1278
5	124	mocap	still	processed	recording	6	right to left	left	1743
5	125	still	reduced	processed	recording	1	left to right	right	831
5	126	mocap	mocap	recording	text to speech	6	right to left	left	599
5	127	mocap	still	recording	recording	6	right to left	left	649
5	128	still	still	text to speech	processed	2	right to left	right	881
5	129	mocap	mocap	processed	text to speech	5	left to right	right	1113
5	130	reduced	reduced	text to speech	processed	8	right to left	right	517
5	131	reduced	still	processed	recording	5	left to right	left	517
5	132	still	mocap	text to speech	processed	5	left to right	right	947
5	133	mocap	mocap	processed	recording	7	left to right	right	1428
5	134	still	reduced	recording	text to speech	5	left to right	left	3548
5	135	mocap	mocap	text to speech	processed	6	right to left	right	750
5	136	reduced	reduced	processed	recording	2	right to left	right	1511
5	137	still	still	text to speech	processed	1	left to right	right	948
5	138	still	reduced	text to speech	text to speech	6	right to left	right	700
5	139	still	still	processed	text to speech	1	left to right	left	1528
5	140	mocap	reduced	recording	processed	2	right to left	left	517
5	141	mocap	reduced	recording	processed	1	left to right	left	1362
5	142	mocap	reduced	processed	text to speech	8	right to left	right	1312
5	143	still	still	processed	recording	4	right to left	right	2272

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
6	0	mocap	still	recording	processed	4	right to left	left	9966
6	1	still	reduced	recording	processed	7	left to right	left	2560
6	2	mocap	reduced	recording	processed	1	left to right	right	1731
6	3	still	mocap	recording	processed	5	left to right	right	1088
6	4	reduced	mocap	text to speech	processed	6	right to left	left	1665
6	5	mocap	still	processed	processed	3	left to right	left	1135
6	6	reduced	reduced	text to speech	recording	2	right to left	right	1350
6	7	still	still	text to speech	processed	1	left to right	right	3305
6	8	still	reduced	processed	recording	2	right to left	left	1698
6	9	mocap	reduced	recording	text to speech	8	right to left	right	2112
6	10	still	mocap	text to speech	processed	5	left to right	right	1052
6	11	mocap	still	text to speech	processed	3	left to right	left	1317
6	12	reduced	reduced	processed	recording	2	right to left	left	1135
6	13	still	mocap	recording	recording	7	left to right	right	1516
6	14	still	still	recording	processed	4	right to left	left	1218
6	15	still	reduced	text to speech	recording	2	right to left	right	1002
6	16	still	still	processed	recording	3	left to right	left	3918
6	17	still	still	recording	processed	3	left to right	right	1267
6	18	still	reduced	recording	recording	1	left to right	right	1085
6	19	still	mocap	processed	recording	7	left to right	right	1086
6	20	still	mocap	recording	text to speech	4	right to left	right	1334
6	21	mocap	mocap	recording	text to speech	5	left to right	right	1002
6	22	mocap	reduced	recording	recording	3	left to right	left	969
6	23	still	still	processed	text to speech	1	left to right	right	2809
6	24	mocap	reduced	text to speech	text to speech	8	right to left	right	1284
6	25	still	mocap	recording	recording	8	right to left	right	1251
6	26	still	mocap	recording	text to speech	3	left to right	right	2628
6	27	reduced	reduced	processed	text to speech	8	right to left	right	936
6	28	reduced	reduced	text to speech	processed	7	left to right	right	1085
6	29	reduced	reduced	processed	recording	1	left to right	left	2825
6	30	reduced	mocap	recording	recording	7	left to right	left	1400
6	31	mocap	still	processed	recording	6	right to left	left	1218
6	32	mocap	still	recording	recording	6	right to left	left	2162
6	33	mocap	mocap	recording	processed	8	right to left	right	4050
6	34	still	mocap	text to speech	recording	7	left to right	right	1367
6	35	reduced	still	processed	processed	4	right to left	left	2676
6	36	reduced	still	processed	recording	6	right to left	left	970
6	37	still	reduced	processed	text to speech	5	left to right	right	1135
6	38	reduced	mocap	text to speech	text to speech	4	right to left	right	2759
6	39	reduced	mocap	processed	text to speech	3	left to right	left	3090
6	40	reduced	still	text to speech	recording	6	right to left	right	1135
6	41	still	still	recording	text to speech	1	left to right	left	1483
6	42	still	mocap	processed	text to speech	4	right to left	right	903
6	43	still	still	text to speech	recording	4	right to left	right	1002
6	44	mocap	still	processed	text to speech	1	left to right	left	1350
6	45	still	reduced	recording	text to speech	5	left to right	right	969
6	46	reduced	mocap	processed	processed	6	right to left	right	936
6	47	reduced	reduced	recording	text to speech	8	right to left	right	853
6	48	still	mocap	processed	recording	8	right to left	right	903
6	49	mocap	reduced	processed	recording	4	right to left	right	1896
6	50	reduced	still	text to speech	recording	5	left to right	left	2344
6	51	mocap	reduced	recording	text to speech	7	left to right	left	1085
6	52	mocap	reduced	recording	processed	2	right to left	right	887
6	53	mocap	still	text to speech	text to speech	1	left to right	left	1103
6	54	reduced	mocap	recording	processed	5	left to right	right	837
6	55	still	reduced	text to speech	processed	7	left to right	right	953
6	56	mocap	reduced	text to speech	processed	1	left to right	left	1036
6	57	still	reduced	recording	text to speech	6	right to left	right	986
6	58	reduced	still	recording	processed	4	right to left	left	854
6	59	reduced	still	recording	text to speech	1	left to right	left	1300

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
6	60	reduced	mocap	recording	recording	8	right to left	right	1533
6	61	mocap	mocap	processed	recording	7	left to right	right	920
6	62	mocap	still	recording	text to speech	1	left to right	left	1052
6	63	reduced	still	text to speech	text to speech	1	left to right	left	969
6	64	reduced	still	processed	text to speech	2	right to left	left	1184
6	65	mocap	still	text to speech	processed	4	right to left	right	1350
6	66	reduced	still	recording	recording	5	left to right	left	854
6	67	still	still	text to speech	recording	3	left to right	left	1996
6	68	still	reduced	text to speech	text to speech	5	left to right	right	853
6	69	reduced	still	recording	processed	3	left to right	left	2344
6	70	mocap	reduced	text to speech	text to speech	7	left to right	left	919
6	71	mocap	reduced	recording	recording	4	right to left	right	2195
6	72	mocap	still	processed	recording	5	left to right	left	936
6	73	reduced	still	text to speech	processed	4	right to left	left	1002
6	74	reduced	reduced	processed	text to speech	7	left to right	left	936
6	75	reduced	still	text to speech	text to speech	2	right to left	right	1648
6	76	still	still	text to speech	processed	2	right to left	right	1002
6	77	mocap	reduced	processed	text to speech	7	left to right	right	1019
6	78	mocap	still	text to speech	text to speech	2	right to left	left	1003
6	79	mocap	mocap	processed	text to speech	5	left to right	right	1185
6	80	mocap	still	processed	processed	4	right to left	left	1052
6	81	still	mocap	recording	processed	6	right to left	right	1119
6	82	still	reduced	processed	recording	1	left to right	right	1068
6	83	reduced	mocap	processed	recording	8	right to left	left	1018
6	84	reduced	mocap	processed	recording	7	left to right	left	3406
6	85	mocap	mocap	processed	recording	8	right to left	right	969
6	86	reduced	mocap	processed	processed	5	left to right	right	1118
6	87	mocap	reduced	processed	recording	3	left to right	left	1135
6	88	still	mocap	processed	processed	6	right to left	right	1085
6	89	still	reduced	text to speech	recording	1	left to right	right	1102
6	90	reduced	mocap	recording	text to speech	3	left to right	left	1499
6	91	mocap	reduced	text to speech	recording	3	left to right	right	1914
6	92	reduced	mocap	text to speech	text to speech	3	left to right	right	2361
6	93	mocap	mocap	text to speech	processed	5	left to right	left	1168
6	94	reduced	reduced	text to speech	recording	1	left to right	left	1185
6	95	reduced	reduced	recording	text to speech	7	left to right	right	1102
6	96	reduced	mocap	text to speech	processed	5	left to right	left	1204
6	97	mocap	mocap	recording	text to speech	6	right to left	left	1748
6	98	still	mocap	text to speech	text to speech	4	right to left	right	1350
6	99	mocap	still	recording	recording	5	left to right	left	1930
6	100	still	mocap	text to speech	processed	6	right to left	right	1052
6	101	reduced	mocap	text to speech	recording	7	left to right	right	1085
6	102	still	still	recording	text to speech	2	right to left	right	1764
6	103	still	reduced	processed	text to speech	6	right to left	right	903
6	104	mocap	reduced	text to speech	recording	4	right to left	left	1151
6	105	mocap	mocap	text to speech	recording	8	right to left	right	1334
6	106	reduced	mocap	text to speech	recording	8	right to left	left	2410
6	107	still	still	processed	text to speech	2	right to left	right	1267
6	108	reduced	mocap	recording	text to speech	4	right to left	right	1152
6	109	reduced	still	processed	text to speech	1	left to right	left	1267
6	110	reduced	still	processed	processed	3	left to right	left	1367
6	111	still	mocap	text to speech	text to speech	3	left to right	left	1916
6	112	mocap	reduced	processed	text to speech	8	right to left	right	1168
6	113	mocap	mocap	text to speech	recording	7	left to right	right	1366
6	114	mocap	still	text to speech	recording	5	left to right	left	804
6	115	mocap	mocap	text to speech	processed	6	right to left	left	886
6	116	still	reduced	recording	recording	2	right to left	right	1384
6	117	reduced	still	recording	text to speech	2	right to left	left	920
6	118	mocap	still	text to speech	recording	6	right to left	left	1466
6	119	still	reduced	processed	processed	7	left to right	right	953

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
6	120	mocap	still	processed	text to speech	2	right to left	left	1317
6	121	mocap	mocap	processed	text to speech	6	right to left	right	1367
6	122	reduced	reduced	recording	processed	2	right to left	right	1201
6	123	reduced	still	recording	recording	6	right to left	right	1780
6	124	still	reduced	recording	processed	8	right to left	right	1400
6	125	mocap	still	recording	text to speech	2	right to left	left	836
6	126	still	reduced	text to speech	text to speech	6	right to left	right	2907
6	127	still	reduced	processed	processed	8	right to left	right	1317
6	128	reduced	still	text to speech	processed	3	left to right	left	1914
6	129	still	reduced	text to speech	processed	8	right to left	right	1085
6	130	mocap	mocap	recording	processed	7	left to right	left	936
6	131	still	still	processed	recording	4	right to left	right	935
6	132	reduced	reduced	text to speech	processed	8	right to left	right	903
6	133	still	mocap	processed	text to speech	3	left to right	left	1499
6	134	reduced	mocap	recording	processed	6	right to left	right	1003
6	135	mocap	still	recording	processed	3	left to right	left	1267
6	136	reduced	reduced	recording	processed	1	left to right	right	3487
6	137	mocap	reduced	processed	processed	2	right to left	right	1731
6	138	still	mocap	text to speech	recording	8	right to left	right	936
6	139	mocap	reduced	text to speech	processed	2	right to left	left	968
6	140	mocap	reduced	processed	processed	1	left to right	right	2178
6	141	reduced	still	processed	recording	5	left to right	left	953
6	142	still	mocap	processed	processed	5	left to right	right	1499
6	143	reduced	mocap	processed	text to speech	4	right to left	right	1135
7	0	reduced	still	processed	text to speech	1	left to right	right	2162
7	1	still	still	processed	text to speech	1	left to right	right	1980
7	2	mocap	reduced	text to speech	text to speech	8	right to left	left	771
7	3	mocap	still	text to speech	recording	6	right to left	right	2559
7	4	still	mocap	recording	recording	8	right to left	left	1566
7	5	mocap	reduced	recording	processed	1	left to right	right	1946
7	6	mocap	mocap	recording	processed	8	right to left	right	1848
7	7	reduced	still	text to speech	text to speech	2	right to left	right	3868
7	8	reduced	mocap	text to speech	recording	7	left to right	right	4117
7	9	mocap	still	processed	recording	6	right to left	left	1367
7	10	still	reduced	processed	recording	2	right to left	right	2708
7	11	still	reduced	text to speech	processed	7	left to right	right	2957
7	12	still	reduced	text to speech	recording	1	left to right	right	522
7	13	still	mocap	text to speech	recording	7	left to right	right	1333
7	14	still	mocap	processed	processed	6	right to left	left	4184
7	15	still	mocap	text to speech	text to speech	3	left to right	right	1068
7	16	mocap	mocap	text to speech	recording	7	left to right	right	953
7	17	mocap	reduced	recording	text to speech	8	right to left	left	969
7	18	reduced	still	processed	text to speech	2	right to left	left	920
7	19	mocap	still	recording	text to speech	1	left to right	left	869
7	20	still	reduced	processed	processed	7	left to right	right	803
7	21	mocap	mocap	processed	recording	7	left to right	left	1996
7	22	mocap	reduced	text to speech	text to speech	7	left to right	right	522
7	23	still	mocap	text to speech	processed	6	right to left	right	720
7	24	mocap	mocap	recording	processed	7	left to right	right	1599
7	25	still	reduced	recording	processed	7	left to right	right	1582
7	26	reduced	mocap	text to speech	text to speech	4	right to left	left	953
7	27	still	still	processed	recording	3	left to right	left	1118
7	28	mocap	reduced	recording	recording	3	left to right	left	969
7	29	still	mocap	text to speech	text to speech	4	right to left	right	1632
7	30	mocap	still	recording	processed	3	left to right	left	1234
7	31	reduced	mocap	processed	text to speech	4	right to left	left	952
7	32	mocap	mocap	text to speech	processed	6	right to left	right	1052
7	33	reduced	reduced	recording	processed	2	right to left	left	870
7	34	reduced	reduced	recording	text to speech	8	right to left	right	2791
7	35	reduced	still	text to speech	processed	4	right to left	left	1185

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
7	36	still	still	recording	text to speech	1	left to right	left	3853
7	37	reduced	still	recording	recording	6	right to left	left	1301
7	38	mocap	reduced	text to speech	processed	2	right to left	right	1268
7	39	mocap	reduced	processed	recording	3	left to right	left	2278
7	40	still	mocap	processed	recording	7	left to right	right	1698
7	41	still	reduced	text to speech	text to speech	6	right to left	right	1168
7	42	reduced	reduced	recording	processed	1	left to right	right	1151
7	43	still	reduced	text to speech	recording	2	right to left	right	1235
7	44	reduced	still	recording	processed	4	right to left	left	1002
7	45	still	mocap	text to speech	recording	8	right to left	right	953
7	46	still	mocap	text to speech	processed	5	left to right	right	1035
7	47	reduced	reduced	text to speech	processed	7	left to right	right	919
7	48	reduced	mocap	text to speech	processed	5	left to right	right	1151
7	49	still	still	text to speech	recording	3	left to right	right	4266
7	50	mocap	still	text to speech	processed	3	left to right	left	1119
7	51	reduced	reduced	recording	text to speech	7	left to right	left	886
7	52	still	still	recording	text to speech	2	right to left	left	985
7	53	reduced	mocap	processed	text to speech	3	left to right	left	1151
7	54	mocap	reduced	recording	text to speech	7	left to right	left	1368
7	55	mocap	reduced	recording	processed	2	right to left	left	1897
7	56	still	still	recording	processed	4	right to left	left	1151
7	57	still	reduced	recording	recording	2	right to left	left	2410
7	58	reduced	reduced	text to speech	recording	2	right to left	right	1069
7	59	still	reduced	processed	recording	1	left to right	right	1171
7	60	reduced	mocap	processed	recording	8	right to left	right	1002
7	61	reduced	reduced	text to speech	recording	1	left to right	right	886
7	62	reduced	still	text to speech	processed	3	left to right	left	2111
7	63	still	reduced	recording	recording	1	left to right	right	887
7	64	still	mocap	processed	recording	8	right to left	right	919
7	65	reduced	reduced	processed	text to speech	7	left to right	left	1217
7	66	mocap	reduced	recording	recording	4	right to left	left	1449
7	67	mocap	still	recording	text to speech	2	right to left	left	1002
7	68	reduced	still	processed	recording	5	left to right	right	952
7	69	still	mocap	recording	recording	7	left to right	right	1068
7	70	mocap	reduced	text to speech	processed	1	left to right	right	837
7	71	mocap	reduced	processed	processed	1	left to right	right	1019
7	72	mocap	still	processed	text to speech	2	right to left	left	1085
7	73	still	mocap	processed	text to speech	3	left to right	left	1201
7	74	mocap	still	recording	recording	5	left to right	right	2179
7	75	still	still	recording	processed	3	left to right	left	2062
7	76	reduced	reduced	processed	text to speech	8	right to left	left	1037
7	77	mocap	reduced	processed	text to speech	7	left to right	left	4648
7	78	reduced	mocap	recording	text to speech	4	right to left	left	1102
7	79	mocap	still	text to speech	recording	5	left to right	right	2212
7	80	mocap	still	processed	processed	4	right to left	left	919
7	81	still	reduced	recording	text to speech	5	left to right	right	1002
7	82	reduced	mocap	text to speech	text to speech	3	left to right	left	985
7	83	mocap	still	processed	recording	5	left to right	right	1648
7	84	reduced	mocap	recording	processed	5	left to right	left	3487
7	85	reduced	mocap	processed	processed	6	right to left	left	1184
7	86	still	still	text to speech	processed	2	right to left	right	919
7	87	mocap	still	processed	text to speech	1	left to right	left	986
7	88	mocap	reduced	text to speech	recording	4	right to left	right	1019
7	89	still	mocap	recording	processed	5	left to right	right	985
7	90	still	reduced	recording	processed	8	right to left	right	803
7	91	reduced	still	recording	processed	3	left to right	left	1068
7	92	mocap	reduced	processed	recording	4	right to left	left	1996
7	93	reduced	still	processed	processed	4	right to left	left	937
7	94	mocap	reduced	text to speech	recording	3	left to right	right	2891
7	95	still	reduced	processed	text to speech	6	right to left	right	2344

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
7	96	mocap	mocap	processed	recording	8	right to left	right	903
7	97	still	reduced	recording	text to speech	6	right to left	left	1085
7	98	mocap	mocap	recording	text to speech	6	right to left	left	953
7	99	reduced	reduced	processed	recording	1	left to right	right	1664
7	100	still	still	text to speech	processed	1	left to right	right	1036
7	101	reduced	mocap	recording	text to speech	3	left to right	left	1151
7	102	still	mocap	recording	processed	6	right to left	right	2445
7	103	reduced	still	recording	recording	5	left to right	left	952
7	104	still	mocap	recording	text to speech	4	right to left	right	2609
7	105	still	mocap	recording	text to speech	3	left to right	right	1964
7	106	reduced	still	text to speech	recording	5	left to right	left	2642
7	107	reduced	mocap	text to speech	processed	6	right to left	right	1086
7	108	reduced	still	processed	processed	3	left to right	left	1069
7	109	mocap	still	text to speech	text to speech	1	left to right	left	870
7	110	reduced	reduced	text to speech	processed	8	right to left	right	1200
7	111	reduced	still	recording	text to speech	1	left to right	left	1151
7	112	still	still	processed	text to speech	2	right to left	left	1201
7	113	reduced	mocap	processed	recording	7	left to right	right	2130
7	114	still	still	text to speech	recording	4	right to left	right	803
7	115	still	reduced	text to speech	processed	8	right to left	right	1002
7	116	reduced	mocap	recording	recording	7	left to right	left	2410
7	117	mocap	still	text to speech	text to speech	2	right to left	left	887
7	118	mocap	still	text to speech	processed	4	right to left	left	919
7	119	mocap	mocap	processed	text to speech	6	right to left	left	935
7	120	still	still	processed	recording	4	right to left	right	2658
7	121	mocap	reduced	processed	text to speech	8	right to left	left	903
7	122	reduced	still	text to speech	recording	6	right to left	left	903
7	123	still	reduced	text to speech	text to speech	5	left to right	right	902
7	124	reduced	still	text to speech	text to speech	1	left to right	left	952
7	125	still	reduced	processed	text to speech	5	left to right	right	1002
7	126	reduced	mocap	text to speech	recording	8	right to left	right	903
7	127	reduced	mocap	processed	processed	5	left to right	right	886
7	128	reduced	mocap	recording	recording	8	right to left	right	1200
7	129	reduced	still	recording	text to speech	2	right to left	left	869
7	130	mocap	still	recording	recording	6	right to left	left	1631
7	131	mocap	mocap	processed	text to speech	5	left to right	left	1432
7	132	mocap	mocap	recording	text to speech	5	left to right	left	853
7	133	still	reduced	processed	processed	8	right to left	right	886
7	134	mocap	mocap	text to speech	recording	8	right to left	right	936
7	135	reduced	still	processed	recording	6	right to left	left	986
7	136	mocap	still	processed	processed	3	left to right	left	1068
7	137	still	mocap	processed	text to speech	4	right to left	right	1019
7	138	still	mocap	processed	processed	5	left to right	right	1168
7	139	reduced	mocap	recording	processed	6	right to left	right	1184
7	140	mocap	mocap	text to speech	processed	5	left to right	right	886
7	141	reduced	reduced	processed	recording	2	right to left	left	1035
7	142	mocap	still	recording	processed	4	right to left	left	1018
7	143	mocap	reduced	processed	processed	2	right to left	right	1135
8	0	still	reduced	recording	recording	1	left to right	left	2444
8	1	mocap	still	recording	processed	4	right to left	left	2445
8	2	reduced	mocap	processed	text to speech	3	left to right	left	1682
8	3	mocap	still	recording	recording	6	right to left	right	1499
8	4	reduced	mocap	processed	processed	5	left to right	left	522
8	5	mocap	mocap	recording	processed	7	left to right	left	2957
8	6	reduced	mocap	text to speech	text to speech	4	right to left	right	691
8	7	mocap	mocap	recording	text to speech	5	left to right	left	1765
8	8	reduced	mocap	processed	recording	8	right to left	right	2179
8	9	still	mocap	text to speech	processed	6	right to left	right	1268
8	10	mocap	still	processed	text to speech	1	left to right	right	1964
8	11	mocap	reduced	recording	text to speech	8	right to left	left	1799

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
8	12	still	reduced	processed	recording	1	left to right	right	1218
8	13	mocap	reduced	recording	recording	3	left to right	left	1847
8	14	mocap	mocap	text to speech	processed	6	right to left	left	2428
8	15	mocap	reduced	text to speech	processed	2	right to left	right	523
8	16	reduced	still	text to speech	recording	6	right to left	right	1400
8	17	still	still	text to speech	processed	2	right to left	right	523
8	18	still	mocap	processed	recording	8	right to left	right	1383
8	19	mocap	mocap	text to speech	processed	5	left to right	left	522
8	20	still	still	recording	processed	3	left to right	left	1317
8	21	mocap	still	recording	text to speech	1	left to right	left	1135
8	22	reduced	mocap	text to speech	recording	7	left to right	right	523
8	23	still	reduced	text to speech	processed	7	left to right	right	1019
8	24	mocap	still	processed	recording	5	left to right	right	2560
8	25	reduced	reduced	recording	processed	1	left to right	left	523
8	26	mocap	mocap	recording	text to speech	6	right to left	left	688
8	27	still	reduced	text to speech	processed	8	right to left	left	1151
8	28	still	mocap	recording	processed	5	left to right	left	523
8	29	still	reduced	text to speech	recording	1	left to right	right	523
8	30	reduced	mocap	processed	recording	7	left to right	right	687
8	31	reduced	still	recording	recording	5	left to right	left	820
8	32	still	still	text to speech	recording	3	left to right	right	1284
8	33	still	mocap	text to speech	text to speech	3	left to right	left	522
8	34	reduced	still	text to speech	text to speech	2	right to left	left	3272
8	35	reduced	still	recording	processed	3	left to right	left	986
8	36	mocap	still	text to speech	text to speech	1	left to right	left	970
8	37	mocap	reduced	processed	processed	2	right to left	left	2013
8	38	mocap	reduced	text to speech	text to speech	8	right to left	right	522
8	39	mocap	reduced	recording	processed	1	left to right	left	1068
8	40	reduced	mocap	text to speech	processed	5	left to right	left	886
8	41	still	still	text to speech	processed	1	left to right	right	1019
8	42	still	reduced	recording	processed	8	right to left	left	1068
8	43	reduced	reduced	processed	text to speech	7	left to right	left	523
8	44	mocap	mocap	text to speech	recording	7	left to right	right	919
8	45	mocap	still	processed	processed	4	right to left	right	1185
8	46	reduced	still	recording	processed	4	right to left	left	522
8	47	reduced	still	processed	recording	5	left to right	right	687
8	48	mocap	reduced	processed	text to speech	7	left to right	left	1334
8	49	reduced	mocap	recording	text to speech	3	left to right	left	1235
8	50	reduced	reduced	processed	text to speech	8	right to left	right	704
8	51	mocap	still	recording	recording	5	left to right	left	1599
8	52	reduced	mocap	recording	processed	6	right to left	right	523
8	53	reduced	reduced	text to speech	processed	8	right to left	right	1036
8	54	mocap	still	processed	processed	3	left to right	left	1351
8	55	still	mocap	processed	recording	7	left to right	right	1482
8	56	mocap	mocap	text to speech	recording	8	right to left	right	605
8	57	mocap	still	text to speech	processed	3	left to right	left	821
8	58	mocap	still	text to speech	processed	4	right to left	left	3172
8	59	mocap	still	processed	recording	6	right to left	left	523
8	60	still	reduced	recording	processed	7	left to right	left	953
8	61	still	still	recording	processed	4	right to left	right	1500
8	62	still	still	processed	recording	4	right to left	right	1416
8	63	reduced	reduced	text to speech	processed	7	left to right	right	2543
8	64	still	still	recording	text to speech	2	right to left	left	1467
8	65	reduced	still	text to speech	processed	4	right to left	left	1119
8	66	mocap	still	text to speech	recording	5	left to right	left	522
8	67	mocap	reduced	processed	processed	1	left to right	right	1168
8	68	mocap	mocap	processed	text to speech	6	right to left	left	1400
8	69	still	still	text to speech	recording	4	right to left	right	1135
8	70	still	mocap	text to speech	text to speech	4	right to left	right	1417
8	71	still	mocap	processed	text to speech	3	left to right	right	3223

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
8	72	reduced	still	recording	text to speech	2	right to left	left	539
8	73	still	still	processed	text to speech	1	left to right	right	1848
8	74	mocap	still	text to speech	recording	6	right to left	left	1217
8	75	mocap	reduced	recording	processed	2	right to left	left	2063
8	76	still	mocap	processed	processed	5	left to right	right	671
8	77	still	mocap	recording	recording	8	right to left	left	704
8	78	mocap	still	recording	processed	3	left to right	left	1318
8	79	reduced	still	processed	text to speech	2	right to left	left	1434
8	80	still	mocap	text to speech	recording	8	right to left	left	2162
8	81	mocap	reduced	recording	recording	4	right to left	left	1135
8	82	reduced	still	text to speech	text to speech	1	left to right	left	1815
8	83	still	reduced	recording	text to speech	5	left to right	right	919
8	84	mocap	reduced	text to speech	processed	1	left to right	left	555
8	85	still	still	processed	recording	3	left to right	right	1516
8	86	reduced	reduced	recording	processed	2	right to left	left	522
8	87	reduced	mocap	text to speech	recording	8	right to left	right	1333
8	88	reduced	mocap	text to speech	processed	6	right to left	right	2444
8	89	reduced	reduced	recording	text to speech	8	right to left	left	1351
8	90	reduced	still	text to speech	recording	5	left to right	right	2162
8	91	reduced	still	processed	processed	3	left to right	left	522
8	92	still	mocap	recording	text to speech	4	right to left	left	1019
8	93	still	reduced	processed	processed	8	right to left	right	1566
8	94	mocap	mocap	processed	text to speech	5	left to right	right	2957
8	95	still	mocap	recording	text to speech	3	left to right	right	523
8	96	reduced	mocap	processed	processed	6	right to left	right	1019
8	97	mocap	reduced	processed	recording	3	left to right	right	1533
8	98	still	reduced	processed	processed	7	left to right	right	1351
8	99	mocap	still	text to speech	text to speech	2	right to left	right	7364
8	100	mocap	reduced	text to speech	recording	4	right to left	right	1036
8	101	reduced	mocap	recording	recording	8	right to left	right	522
8	102	still	mocap	recording	processed	6	right to left	right	1367
8	103	still	mocap	recording	recording	7	left to right	right	870
8	104	reduced	reduced	processed	recording	1	left to right	right	1599
8	105	still	reduced	text to speech	recording	2	right to left	right	970
8	106	reduced	reduced	text to speech	recording	2	right to left	right	523
8	107	reduced	reduced	recording	text to speech	7	left to right	left	5309
8	108	still	reduced	processed	text to speech	5	left to right	right	938
8	109	reduced	mocap	processed	text to speech	4	right to left	right	622
8	110	still	reduced	recording	recording	2	right to left	right	1135
8	111	reduced	mocap	recording	recording	7	left to right	right	1400
8	112	reduced	still	text to speech	processed	3	left to right	left	1367
8	113	mocap	mocap	processed	recording	7	left to right	right	886
8	114	reduced	mocap	text to speech	text to speech	3	left to right	left	2112
8	115	reduced	reduced	text to speech	recording	1	left to right	left	1384
8	116	reduced	mocap	recording	processed	5	left to right	left	1085
8	117	still	reduced	text to speech	text to speech	5	left to right	right	1384
8	118	reduced	still	processed	processed	4	right to left	left	1168
8	119	still	reduced	processed	recording	2	right to left	right	522
8	120	reduced	mocap	recording	text to speech	4	right to left	right	523
8	121	mocap	reduced	processed	recording	4	right to left	right	886
8	122	reduced	still	recording	recording	6	right to left	right	1549
8	123	reduced	still	processed	text to speech	1	left to right	right	2344
8	124	mocap	reduced	recording	text to speech	7	left to right	left	1185
8	125	reduced	still	processed	recording	6	right to left	left	522
8	126	mocap	still	recording	text to speech	2	right to left	left	457
8	127	mocap	still	processed	text to speech	2	right to left	left	1234
8	128	still	mocap	text to speech	processed	5	left to right	right	1085
8	129	mocap	reduced	text to speech	text to speech	7	left to right	right	936
8	130	still	mocap	processed	text to speech	4	right to left	left	1168
8	131	still	mocap	processed	processed	6	right to left	left	1748

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
8	132	reduced	reduced	processed	recording	2	right to left	right	1085
8	133	mocap	reduced	text to speech	recording	3	left to right	right	1119
8	134	still	reduced	recording	text to speech	6	right to left	left	2113
8	135	mocap	reduced	processed	text to speech	8	right to left	right	887
8	136	mocap	mocap	recording	processed	8	right to left	left	936
8	137	still	still	processed	text to speech	2	right to left	right	2792
8	138	still	still	recording	text to speech	1	left to right	left	1267
8	139	still	reduced	text to speech	text to speech	6	right to left	right	671
8	140	mocap	mocap	processed	recording	8	right to left	right	1185
8	141	still	mocap	text to speech	recording	7	left to right	right	986
8	142	reduced	still	recording	text to speech	1	left to right	left	1218
8	143	still	reduced	processed	text to speech	6	right to left	left	1152
9	0	mocap	still	processed	recording	6	right to left	left	522
9	1	reduced	reduced	text to speech	recording	2	right to left	right	1632
9	2	still	mocap	processed	processed	5	left to right	left	1947
9	3	reduced	reduced	text to speech	processed	8	right to left	right	887
9	4	still	mocap	text to speech	text to speech	3	left to right	left	1218
9	5	mocap	reduced	text to speech	text to speech	8	right to left	left	754
9	12	mocap	still	recording	processed	4	right to left	left	1814
9	13	still	still	recording	text to speech	2	right to left	left	2973
9	14	reduced	mocap	text to speech	processed	6	right to left	right	1649
9	15	mocap	reduced	processed	processed	2	right to left	left	1135
9	16	still	mocap	recording	text to speech	3	left to right	left	4249
9	17	still	reduced	recording	text to speech	5	left to right	right	1221
9	18	mocap	still	recording	recording	5	left to right	right	1151
9	19	still	reduced	text to speech	processed	8	right to left	left	1234
9	20	mocap	mocap	recording	text to speech	5	left to right	right	1152
9	21	reduced	reduced	processed	text to speech	8	right to left	right	1135
9	22	mocap	mocap	recording	processed	8	right to left	left	1052
9	23	still	reduced	text to speech	recording	2	right to left	right	2874
9	24	mocap	mocap	text to speech	recording	7	left to right	left	1618
9	25	still	still	recording	processed	3	left to right	left	1815
9	26	reduced	still	processed	text to speech	1	left to right	right	2427
9	27	reduced	mocap	recording	text to speech	3	left to right	left	1466
9	28	reduced	still	text to speech	recording	5	left to right	left	1284
9	29	mocap	reduced	recording	recording	4	right to left	left	1217
9	30	mocap	mocap	processed	recording	7	left to right	right	2063
9	31	mocap	reduced	processed	recording	3	left to right	right	1499
9	32	still	still	text to speech	recording	4	right to left	right	1201
9	33	reduced	still	recording	text to speech	2	right to left	left	1019
9	34	mocap	still	processed	text to speech	1	left to right	left	3818
9	35	still	mocap	text to speech	processed	5	left to right	right	1517
9	36	mocap	mocap	recording	processed	7	left to right	left	1484
9	37	still	still	recording	processed	4	right to left	left	1102
9	38	mocap	mocap	text to speech	recording	8	right to left	right	1466
9	39	reduced	still	recording	text to speech	1	left to right	left	2095
9	40	still	mocap	text to speech	recording	8	right to left	right	1268
9	41	reduced	reduced	processed	text to speech	7	left to right	left	1333
9	42	still	mocap	recording	recording	7	left to right	right	2079
9	43	mocap	still	text to speech	text to speech	1	left to right	right	1035
9	44	reduced	reduced	recording	text to speech	7	left to right	left	1366
9	45	reduced	mocap	text to speech	recording	8	right to left	right	985
9	46	mocap	reduced	processed	text to speech	7	left to right	right	1052
9	47	still	reduced	recording	processed	7	left to right	left	1035
9	48	reduced	still	processed	processed	4	right to left	left	1003
9	49	mocap	still	recording	text to speech	2	right to left	left	870
9	50	still	reduced	processed	processed	7	left to right	right	1135
9	51	still	reduced	recording	recording	1	left to right	left	2079
9	52	mocap	still	text to speech	recording	5	left to right	right	886
9	53	reduced	reduced	processed	recording	2	right to left	right	1581

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
9	54	reduced	still	processed	text to speech	2	right to left	left	1963
9	55	still	reduced	processed	recording	2	right to left	right	1698
9	56	still	mocap	processed	recording	8	right to left	left	2957
9	57	still	still	processed	recording	4	right to left	right	1633
9	58	still	still	processed	text to speech	2	right to left	right	1234
9	59	mocap	mocap	text to speech	processed	6	right to left	right	1450
9	60	reduced	reduced	processed	recording	1	left to right	right	985
9	61	reduced	still	recording	recording	5	left to right	right	970
9	62	reduced	mocap	processed	recording	8	right to left	right	2296
9	63	mocap	reduced	recording	processed	2	right to left	left	1549
9	64	mocap	still	text to speech	text to speech	2	right to left	left	970
9	65	mocap	reduced	recording	text to speech	8	right to left	left	1698
9	66	reduced	still	text to speech	recording	6	right to left	right	1300
9	67	reduced	reduced	text to speech	processed	7	left to right	left	1931
9	68	still	reduced	recording	recording	2	right to left	left	1333
9	69	mocap	mocap	text to speech	processed	5	left to right	left	1135
9	70	reduced	still	recording	processed	4	right to left	left	687
9	71	mocap	reduced	recording	recording	3	left to right	left	1284
9	72	reduced	mocap	text to speech	recording	7	left to right	right	2229
9	73	still	reduced	text to speech	recording	1	left to right	right	1085
9	74	reduced	reduced	recording	processed	1	left to right	right	1234
9	75	mocap	still	text to speech	processed	4	right to left	right	1151
9	76	mocap	still	processed	processed	3	left to right	left	1748
9	77	still	mocap	text to speech	processed	6	right to left	right	1019
9	78	still	still	processed	text to speech	1	left to right	left	937
9	79	reduced	mocap	processed	recording	7	left to right	right	1035
9	80	reduced	still	text to speech	processed	4	right to left	left	1102
9	81	reduced	mocap	recording	processed	5	left to right	left	3206
9	82	reduced	mocap	recording	recording	7	left to right	right	1052
9	83	mocap	reduced	text to speech	recording	3	left to right	right	1051
9	84	still	reduced	processed	text to speech	5	left to right	right	1151
9	85	still	mocap	processed	text to speech	4	right to left	right	1036
9	86	still	mocap	text to speech	recording	7	left to right	right	920
9	87	reduced	reduced	text to speech	recording	1	left to right	right	1051
9	88	still	still	text to speech	recording	3	left to right	right	936
9	89	reduced	mocap	text to speech	text to speech	4	right to left	right	1068
9	90	still	still	recording	text to speech	1	left to right	left	1136
9	91	still	still	text to speech	processed	2	right to left	right	1267
9	92	mocap	still	processed	text to speech	2	right to left	left	1234
9	93	mocap	still	processed	recording	5	left to right	right	1134
9	94	reduced	mocap	processed	text to speech	3	left to right	left	1450
9	95	still	reduced	processed	recording	1	left to right	right	1367
9	96	mocap	reduced	recording	processed	1	left to right	right	886
9	97	reduced	reduced	recording	text to speech	8	right to left	left	1201
9	98	mocap	reduced	text to speech	text to speech	7	left to right	right	1234
9	99	reduced	mocap	recording	text to speech	4	right to left	left	1169
9	100	still	reduced	text to speech	processed	7	left to right	left	1002
9	101	mocap	still	recording	processed	3	left to right	left	1433
9	102	still	mocap	recording	recording	8	right to left	right	1234
9	103	reduced	mocap	processed	processed	6	right to left	right	1234
9	104	still	mocap	processed	processed	6	right to left	right	1035
9	105	reduced	still	text to speech	processed	3	left to right	right	1069
9	106	mocap	mocap	recording	text to speech	6	right to left	left	1384
9	107	reduced	still	processed	recording	5	left to right	right	920
9	108	still	reduced	recording	text to speech	6	right to left	left	1070
9	109	mocap	still	recording	text to speech	1	left to right	left	1036
9	110	reduced	still	text to speech	text to speech	1	left to right	left	1383
9	111	mocap	mocap	processed	text to speech	6	right to left	right	1118
9	112	reduced	still	processed	recording	6	right to left	left	1483
9	113	still	reduced	processed	processed	8	right to left	right	1085

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
9	114	mocap	reduced	processed	processed	1	left to right	left	2924
9	115	reduced	mocap	text to speech	processed	5	left to right	right	1002
9	116	reduced	mocap	processed	text to speech	4	right to left	left	1035
9	117	reduced	still	text to speech	text to speech	2	right to left	left	2080
9	118	still	reduced	text to speech	text to speech	5	left to right	right	920
9	119	mocap	reduced	text to speech	recording	4	right to left	right	1301
9	120	still	reduced	recording	processed	8	right to left	right	1035
9	121	still	still	processed	recording	3	left to right	right	952
9	122	mocap	still	text to speech	recording	6	right to left	right	1217
9	123	mocap	reduced	text to speech	processed	2	right to left	right	1235
9	124	still	mocap	recording	text to speech	4	right to left	right	1035
9	125	mocap	mocap	processed	recording	8	right to left	left	936
9	126	mocap	still	processed	processed	4	right to left	left	1035
9	127	still	reduced	processed	text to speech	6	right to left	right	953
9	128	still	still	text to speech	processed	1	left to right	left	1085
9	129	reduced	still	processed	processed	3	left to right	left	1102
9	130	mocap	reduced	processed	recording	4	right to left	left	1019
9	131	reduced	mocap	processed	processed	5	left to right	left	522
9	132	mocap	still	recording	recording	6	right to left	left	920
9	133	reduced	reduced	recording	processed	2	right to left	left	3619
9	134	mocap	still	text to speech	processed	3	left to right	left	1218
9	135	mocap	mocap	processed	text to speech	5	left to right	left	970
9	136	mocap	reduced	text to speech	processed	1	left to right	right	1071
9	137	reduced	mocap	recording	recording	8	right to left	left	1184
9	138	mocap	reduced	recording	text to speech	7	left to right	left	1466
9	139	reduced	still	recording	processed	3	left to right	left	1368
9	140	still	mocap	recording	processed	5	left to right	right	1019
9	141	reduced	still	recording	recording	6	right to left	right	1201
9	142	mocap	reduced	processed	text to speech	8	right to left	right	1450
9	143	reduced	mocap	recording	processed	6	right to left	right	1417
10	0	still	reduced	recording	processed	8	right to left	right	1417
10	1	still	reduced	recording	recording	1	left to right	right	1134
10	2	still	reduced	processed	text to speech	6	right to left	right	1980
10	3	still	mocap	processed	recording	7	left to right	right	1450
10	4	reduced	still	processed	recording	5	left to right	left	1101
10	5	mocap	reduced	text to speech	text to speech	7	left to right	left	1417
10	6	mocap	reduced	recording	recording	4	right to left	left	1085
10	7	mocap	mocap	text to speech	processed	5	left to right	left	886
10	8	mocap	still	recording	text to speech	2	right to left	left	919
10	9	mocap	reduced	processed	processed	2	right to left	right	4912
10	10	still	reduced	recording	processed	7	left to right	right	522
10	11	still	still	text to speech	processed	1	left to right	left	1069
10	12	still	still	text to speech	recording	3	left to right	left	523
10	13	reduced	reduced	recording	text to speech	7	left to right	left	11324
10	14	still	reduced	text to speech	processed	7	left to right	right	903
10	15	reduced	mocap	processed	processed	5	left to right	left	1151
10	16	mocap	still	processed	recording	5	left to right	left	870
10	17	reduced	still	recording	processed	4	right to left	left	1515
10	18	reduced	mocap	text to speech	text to speech	3	left to right	right	840
10	19	reduced	mocap	recording	text to speech	3	left to right	right	886
10	20	still	reduced	processed	processed	8	right to left	right	902
10	21	mocap	mocap	processed	text to speech	6	right to left	left	2211
10	22	still	mocap	text to speech	processed	5	left to right	left	1019
10	23	reduced	still	processed	processed	4	right to left	left	837
10	24	reduced	reduced	text to speech	processed	7	left to right	left	1466
10	25	mocap	reduced	text to speech	recording	3	left to right	right	473
10	26	still	mocap	recording	text to speech	4	right to left	right	837
10	27	still	still	processed	recording	3	left to right	left	9932
10	28	mocap	reduced	text to speech	processed	2	right to left	right	522
10	29	mocap	still	text to speech	recording	5	left to right	left	11373

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
10	30	reduced	mocap	processed	text to speech	3	left to right	left	886
10	31	still	mocap	recording	processed	5	left to right	right	754
10	32	mocap	still	processed	text to speech	1	left to right	left	903
10	33	reduced	mocap	text to speech	recording	7	left to right	right	787
10	34	mocap	still	text to speech	text to speech	1	left to right	left	1251
10	36	still	mocap	processed	text to speech	4	right to left	left	886
10	37	mocap	reduced	recording	processed	1	left to right	right	836
10	38	still	mocap	processed	processed	5	left to right	right	820
10	39	still	still	recording	processed	4	right to left	left	902
10	40	mocap	still	processed	text to speech	2	right to left	left	936
10	41	reduced	mocap	recording	text to speech	4	right to left	right	853
10	42	mocap	still	recording	recording	5	left to right	left	787
10	43	still	reduced	text to speech	text to speech	6	right to left	right	787
10	44	reduced	still	processed	recording	6	right to left	left	869
10	45	reduced	still	processed	text to speech	2	right to left	left	952
10	46	mocap	reduced	processed	text to speech	8	right to left	left	871
10	47	still	mocap	processed	recording	8	right to left	right	737
10	48	still	mocap	recording	text to speech	3	left to right	right	787
10	49	reduced	reduced	recording	text to speech	8	right to left	right	721
10	50	still	mocap	recording	recording	7	left to right	right	737
10	51	mocap	still	recording	recording	6	right to left	left	820
10	52	still	reduced	recording	recording	2	right to left	right	522
10	53	mocap	reduced	processed	recording	3	left to right	left	11224
10	54	still	reduced	processed	text to speech	5	left to right	left	1052
10	55	mocap	still	processed	processed	3	left to right	left	3988
10	56	still	mocap	text to speech	processed	6	right to left	right	803
10	57	reduced	still	text to speech	recording	5	left to right	right	902
10	58	still	reduced	processed	recording	2	right to left	right	853
10	59	reduced	reduced	processed	recording	2	right to left	left	836
10	60	still	still	processed	text to speech	2	right to left	right	523
10	61	still	reduced	recording	text to speech	6	right to left	right	803
10	62	mocap	reduced	recording	text to speech	8	right to left	left	770
10	63	still	mocap	recording	recording	8	right to left	right	903
10	64	still	reduced	recording	text to speech	5	left to right	right	1764
10	65	mocap	still	text to speech	recording	6	right to left	left	522
10	66	mocap	still	text to speech	processed	4	right to left	left	1118
10	67	mocap	mocap	recording	text to speech	5	left to right	left	1085
10	68	reduced	still	text to speech	processed	3	left to right	left	522
10	69	reduced	mocap	recording	processed	5	left to right	left	870
10	70	still	mocap	text to speech	recording	8	right to left	right	1301
10	71	still	mocap	text to speech	text to speech	4	right to left	right	522
10	72	reduced	mocap	processed	processed	6	right to left	right	853
10	73	mocap	mocap	text to speech	recording	8	right to left	left	820
10	74	reduced	mocap	processed	text to speech	4	right to left	left	919
10	75	mocap	still	recording	processed	3	left to right	left	886
10	76	reduced	still	recording	text to speech	1	left to right	left	870
10	77	mocap	reduced	recording	recording	3	left to right	right	836
10	78	still	still	recording	text to speech	2	right to left	left	754
10	79	reduced	reduced	text to speech	recording	1	left to right	left	1018
10	80	still	mocap	processed	text to speech	3	left to right	right	1118
10	81	still	mocap	text to speech	text to speech	3	left to right	right	522
10	82	still	reduced	processed	processed	7	left to right	right	11438
10	83	reduced	reduced	processed	text to speech	7	left to right	left	9137
10	84	still	mocap	recording	processed	6	right to left	right	870
10	85	reduced	reduced	text to speech	processed	8	right to left	right	1119
10	86	reduced	still	text to speech	recording	6	right to left	left	522
10	87	mocap	still	text to speech	text to speech	2	right to left	left	886
10	88	still	still	recording	processed	3	left to right	left	886
10	89	mocap	mocap	processed	recording	8	right to left	left	886
10	90	mocap	mocap	recording	processed	8	right to left	left	820

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
10	91	still	still	text to speech	recording	4	right to left	right	803
10	92	still	reduced	text to speech	recording	2	right to left	right	787
10	93	reduced	mocap	recording	processed	6	right to left	right	870
10	94	reduced	mocap	text to speech	processed	5	left to right	right	820
10	95	reduced	mocap	processed	recording	8	right to left	left	804
10	96	mocap	still	processed	recording	6	right to left	left	787
10	97	mocap	mocap	text to speech	processed	6	right to left	left	1036
10	98	still	reduced	text to speech	processed	8	right to left	right	1731
10	99	reduced	mocap	recording	recording	7	left to right	left	837
10	100	reduced	still	recording	recording	6	right to left	left	803
10	101	reduced	still	text to speech	processed	4	right to left	right	853
10	102	reduced	still	recording	recording	5	left to right	left	886
10	103	reduced	still	recording	processed	3	left to right	left	787
10	104	reduced	reduced	text to speech	recording	2	right to left	right	753
10	105	mocap	mocap	text to speech	recording	7	left to right	right	754
10	106	reduced	mocap	processed	recording	7	left to right	right	738
10	107	still	mocap	text to speech	recording	7	left to right	right	986
10	108	reduced	reduced	recording	processed	2	right to left	right	854
10	109	mocap	mocap	recording	text to speech	6	right to left	left	870
10	110	mocap	mocap	recording	processed	7	left to right	left	853
10	111	reduced	mocap	text to speech	recording	8	right to left	right	770
10	112	still	reduced	text to speech	text to speech	5	left to right	right	903
10	113	reduced	still	recording	text to speech	2	right to left	left	786
10	114	reduced	reduced	processed	recording	1	left to right	right	753
10	115	reduced	mocap	recording	recording	8	right to left	left	737
10	116	still	mocap	processed	processed	6	right to left	right	621
10	117	mocap	reduced	text to speech	text to speech	8	right to left	right	753
10	118	mocap	mocap	processed	recording	7	left to right	right	770
10	119	mocap	still	processed	processed	4	right to left	left	736
10	120	mocap	reduced	processed	recording	4	right to left	right	771
10	121	reduced	reduced	processed	text to speech	8	right to left	left	853
10	122	mocap	reduced	processed	processed	1	left to right	right	1250
10	123	mocap	reduced	text to speech	processed	1	left to right	left	522
10	124	still	still	processed	text to speech	1	left to right	left	8159
10	125	mocap	reduced	text to speech	recording	4	right to left	left	8425
10	126	mocap	mocap	processed	text to speech	5	left to right	left	820
10	127	mocap	still	recording	text to speech	1	left to right	left	820
10	128	mocap	still	text to speech	processed	3	left to right	left	11458
10	129	mocap	still	recording	processed	4	right to left	left	1251
10	130	still	reduced	text to speech	recording	1	left to right	right	837
10	131	still	reduced	processed	recording	1	left to right	right	936
10	132	reduced	still	text to speech	text to speech	1	left to right	left	986
10	133	still	still	recording	text to speech	1	left to right	left	920
10	134	reduced	still	processed	processed	3	left to right	left	886
10	135	mocap	reduced	processed	text to speech	7	left to right	left	1035
10	136	still	still	processed	recording	4	right to left	left	803
10	137	still	still	text to speech	processed	2	right to left	right	919
10	138	mocap	reduced	recording	text to speech	7	left to right	left	952
10	139	reduced	still	text to speech	text to speech	2	right to left	left	869
10	140	reduced	still	processed	text to speech	1	left to right	left	837
10	141	reduced	reduced	recording	processed	1	left to right	right	837
10	142	mocap	reduced	recording	processed	2	right to left	right	985
10	143	reduced	mocap	text to speech	processed	6	right to left	right	904
11	0	mocap	still	text to speech	recording	6	right to left	right	523
11	1	still	still	processed	text to speech	2	right to left	left	5342
11	2	still	still	text to speech	recording	3	left to right	right	2112
11	3	still	mocap	recording	recording	7	left to right	right	6520
11	4	still	reduced	text to speech	recording	2	right to left	right	638
11	5	reduced	mocap	recording	text to speech	4	right to left	left	2228
11	6	still	mocap	text to speech	processed	6	right to left	right	1102

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
11	7	reduced	still	processed	recording	5	left to right	left	522
11	8	mocap	mocap	processed	recording	8	right to left	right	1218
11	9	mocap	reduced	processed	processed	2	right to left	right	1251
11	10	still	reduced	recording	text to speech	6	right to left	right	1731
11	11	still	still	text to speech	processed	2	right to left	left	2609
11	12	still	reduced	text to speech	processed	8	right to left	right	3438
11	13	reduced	still	recording	text to speech	2	right to left	left	1350
11	14	still	reduced	processed	recording	2	right to left	right	2940
11	15	mocap	still	processed	recording	6	right to left	right	2245
11	16	reduced	still	text to speech	text to speech	1	left to right	right	4216
11	17	mocap	mocap	processed	text to speech	5	left to right	left	1585
11	18	reduced	reduced	text to speech	processed	8	right to left	right	1019
11	19	reduced	still	recording	recording	6	right to left	right	2195
11	20	reduced	reduced	processed	recording	2	right to left	right	1483
11	21	mocap	still	text to speech	processed	3	left to right	right	920
11	22	mocap	mocap	recording	processed	8	right to left	left	903
11	23	reduced	still	processed	recording	6	right to left	left	7165
11	24	reduced	mocap	text to speech	recording	7	left to right	right	1963
11	25	still	still	processed	text to speech	1	left to right	left	1499
11	26	still	reduced	recording	processed	8	right to left	left	1102
11	27	reduced	mocap	recording	processed	6	right to left	right	1565
11	28	mocap	reduced	recording	recording	4	right to left	right	2493
11	29	reduced	mocap	processed	processed	6	right to left	left	3769
11	30	mocap	still	text to speech	text to speech	2	right to left	right	2692
11	31	mocap	reduced	recording	recording	3	left to right	left	2097
11	32	reduced	reduced	processed	recording	1	left to right	left	920
11	33	mocap	reduced	processed	recording	4	right to left	left	1118
11	34	mocap	still	processed	text to speech	1	left to right	left	887
11	35	mocap	still	recording	processed	4	right to left	right	1466
11	36	reduced	reduced	recording	text to speech	8	right to left	left	1235
11	37	mocap	mocap	recording	text to speech	5	left to right	left	1118
11	38	reduced	still	processed	processed	3	left to right	left	7910
11	39	still	still	recording	text to speech	2	right to left	right	522
11	40	still	reduced	recording	text to speech	5	left to right	left	1267
11	41	reduced	mocap	text to speech	text to speech	3	left to right	right	6005
11	42	still	mocap	text to speech	processed	5	left to right	right	1102
11	43	reduced	mocap	processed	recording	7	left to right	left	2031
11	44	reduced	mocap	recording	text to speech	3	left to right	left	1400
11	45	reduced	mocap	recording	recording	8	right to left	right	3106
11	46	mocap	still	recording	processed	3	left to right	left	4680
11	47	still	mocap	processed	processed	5	left to right	left	522
11	48	mocap	still	recording	text to speech	2	right to left	left	1118
11	49	mocap	reduced	recording	text to speech	7	left to right	left	1830
11	50	still	mocap	processed	recording	8	right to left	right	720
11	51	still	still	recording	processed	3	left to right	right	4863
11	52	mocap	reduced	processed	text to speech	7	left to right	left	5177
11	53	mocap	still	recording	recording	5	left to right	left	8359
11	54	mocap	reduced	text to speech	recording	4	right to left	left	4416
11	55	reduced	reduced	recording	text to speech	7	left to right	left	2742
11	56	still	reduced	processed	recording	1	left to right	right	4630
11	57	mocap	mocap	recording	text to speech	6	right to left	left	523
11	58	reduced	still	recording	recording	5	left to right	right	6982
11	59	still	reduced	text to speech	text to speech	5	left to right	right	7844
11	60	reduced	still	text to speech	text to speech	2	right to left	left	2228
11	61	reduced	reduced	processed	text to speech	8	right to left	left	936
11	62	still	still	text to speech	recording	4	right to left	right	1118
11	63	reduced	mocap	text to speech	recording	8	right to left	right	522
11	64	still	reduced	recording	processed	7	left to right	right	11224
11	65	still	mocap	processed	recording	7	left to right	right	492
11	66	reduced	mocap	recording	processed	5	left to right	left	505

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
11	67	reduced	reduced	recording	processed	1	left to right	right	1316
11	68	still	mocap	text to speech	text to speech	4	right to left	left	2809
11	69	still	reduced	text to speech	text to speech	6	right to left	right	522
11	70	reduced	still	recording	processed	4	right to left	left	1432
11	71	still	still	recording	processed	4	right to left	right	1781
11	72	mocap	still	recording	text to speech	1	left to right	left	1814
11	73	still	mocap	recording	processed	5	left to right	left	1532
11	74	mocap	mocap	text to speech	recording	7	left to right	right	1865
11	75	still	reduced	processed	processed	7	left to right	left	638
11	76	still	mocap	processed	processed	6	right to left	right	1781
11	77	reduced	still	recording	text to speech	1	left to right	left	1234
11	78	mocap	reduced	recording	processed	1	left to right	right	1434
11	79	still	mocap	processed	text to speech	3	left to right	left	1136
11	80	reduced	mocap	text to speech	processed	5	left to right	right	1317
11	81	reduced	reduced	processed	text to speech	7	left to right	left	1798
11	82	mocap	reduced	processed	processed	1	left to right	right	1068
11	83	reduced	still	text to speech	recording	6	right to left	right	522
11	84	reduced	still	text to speech	processed	4	right to left	right	522
11	85	mocap	still	text to speech	text to speech	1	left to right	left	5292
11	86	mocap	mocap	text to speech	processed	5	left to right	right	2593
11	87	mocap	reduced	text to speech	recording	3	left to right	right	771
11	88	reduced	reduced	recording	processed	2	right to left	left	1218
11	89	reduced	mocap	recording	recording	7	left to right	right	1682
11	90	still	still	processed	recording	3	left to right	right	2030
11	91	reduced	reduced	text to speech	recording	1	left to right	right	1616
11	92	still	mocap	text to speech	recording	8	right to left	right	1069
11	93	mocap	still	processed	text to speech	2	right to left	left	1052
11	94	reduced	mocap	processed	recording	8	right to left	right	1516
11	95	still	mocap	recording	processed	6	right to left	right	2113
11	96	still	mocap	processed	text to speech	4	right to left	left	1136
11	97	reduced	still	text to speech	processed	3	left to right	right	1168
11	98	mocap	reduced	text to speech	text to speech	7	left to right	right	6750
11	99	mocap	reduced	processed	text to speech	8	right to left	left	523
11	100	still	reduced	text to speech	processed	7	left to right	right	2741
11	101	mocap	reduced	text to speech	processed	2	right to left	right	5458
11	102	mocap	mocap	recording	processed	7	left to right	left	1599
11	103	still	mocap	recording	text to speech	3	left to right	left	4171
11	104	reduced	mocap	processed	processed	5	left to right	left	1532
11	105	mocap	reduced	recording	text to speech	8	right to left	left	1549
11	106	mocap	still	processed	recording	5	left to right	right	1235
11	107	still	reduced	processed	text to speech	6	right to left	left	1052
11	108	still	still	processed	recording	4	right to left	right	523
11	109	still	reduced	processed	processed	8	right to left	left	1565
11	110	mocap	mocap	processed	text to speech	6	right to left	left	1202
11	111	still	reduced	processed	text to speech	5	left to right	left	738
11	112	mocap	still	text to speech	processed	4	right to left	right	753
11	113	still	mocap	recording	text to speech	4	right to left	left	1350
11	114	reduced	still	recording	processed	3	left to right	right	2825
11	115	still	mocap	recording	recording	8	right to left	right	2742
11	116	mocap	reduced	text to speech	processed	1	left to right	right	1284
11	117	still	still	recording	text to speech	1	left to right	left	1433
11	118	mocap	reduced	text to speech	text to speech	8	right to left	right	1665
11	119	reduced	reduced	text to speech	recording	2	right to left	right	953
11	120	still	reduced	recording	recording	2	right to left	right	522
11	121	reduced	still	text to speech	recording	5	left to right	right	1151
11	122	still	still	text to speech	processed	1	left to right	right	1101
11	123	still	reduced	recording	recording	1	left to right	left	1499
11	124	reduced	still	processed	processed	4	right to left	right	721
11	125	reduced	mocap	processed	text to speech	3	left to right	left	1482
11	126	mocap	still	recording	recording	6	right to left	right	1517

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
11	127	reduced	mocap	text to speech	processed	6	right to left	right	1102
11	128	still	mocap	text to speech	recording	7	left to right	right	804
11	129	still	mocap	text to speech	text to speech	3	left to right	left	3239
11	130	mocap	still	processed	processed	3	left to right	left	704
11	131	reduced	mocap	text to speech	text to speech	4	right to left	right	2825
11	132	reduced	reduced	text to speech	processed	7	left to right	right	2511
11	133	mocap	reduced	processed	recording	3	left to right	left	523
11	134	mocap	still	text to speech	recording	5	left to right	right	6452
11	135	mocap	reduced	recording	processed	2	right to left	right	1450
11	136	reduced	still	processed	text to speech	2	right to left	left	1549
11	137	reduced	still	processed	text to speech	1	left to right	left	4879
11	138	mocap	still	processed	processed	4	right to left	right	523
11	139	mocap	mocap	text to speech	processed	6	right to left	right	2642
11	140	reduced	mocap	processed	text to speech	4	right to left	left	523
11	141	mocap	mocap	processed	recording	7	left to right	right	1283
11	142	still	reduced	text to speech	recording	1	left to right	right	1316
11	143	mocap	mocap	text to speech	recording	8	right to left	right	1466
12	0	mocap	reduced	recording	recording	3	left to right	right	2362
12	1	still	still	processed	text to speech	1	left to right	left	522
12	2	still	reduced	processed	text to speech	6	right to left	left	590
12	3	reduced	mocap	recording	text to speech	3	left to right	left	522
12	4	reduced	reduced	text to speech	processed	7	left to right	right	621
12	5	mocap	still	processed	recording	5	left to right	left	523
12	6	reduced	reduced	recording	text to speech	8	right to left	left	1384
12	7	still	still	processed	recording	4	right to left	right	622
12	8	mocap	still	text to speech	recording	5	left to right	right	671
12	9	mocap	still	text to speech	text to speech	1	left to right	left	954
12	10	still	mocap	text to speech	recording	8	right to left	right	970
12	11	still	reduced	text to speech	text to speech	6	right to left	right	522
12	12	mocap	reduced	text to speech	processed	2	right to left	right	952
12	13	reduced	mocap	processed	processed	6	right to left	right	2576
12	14	reduced	reduced	text to speech	processed	8	right to left	right	986
12	15	mocap	still	processed	text to speech	2	right to left	left	853
12	16	reduced	still	recording	processed	4	right to left	left	3703
12	17	reduced	still	processed	processed	4	right to left	right	953
12	18	reduced	reduced	processed	text to speech	8	right to left	left	888
12	19	mocap	reduced	text to speech	text to speech	8	right to left	left	953
12	20	reduced	mocap	text to speech	text to speech	3	left to right	left	887
12	21	still	still	recording	processed	4	right to left	left	1235
12	22	still	still	text to speech	recording	4	right to left	right	1202
12	23	still	reduced	text to speech	processed	8	right to left	left	1433
12	24	mocap	reduced	processed	processed	1	left to right	left	3472
12	25	still	mocap	processed	processed	6	right to left	left	1118
12	26	reduced	reduced	processed	recording	1	left to right	left	1003
12	27	reduced	still	text to speech	processed	3	left to right	right	903
12	28	still	reduced	recording	processed	7	left to right	right	936
12	29	reduced	mocap	text to speech	processed	5	left to right	right	936
12	30	still	still	text to speech	processed	1	left to right	right	920
12	31	mocap	mocap	recording	text to speech	5	left to right	left	887
12	32	still	mocap	recording	text to speech	3	left to right	left	906
12	33	still	reduced	text to speech	text to speech	5	left to right	left	1003
12	34	still	still	recording	text to speech	1	left to right	right	936
12	35	mocap	mocap	recording	processed	7	left to right	right	936
12	36	still	mocap	text to speech	text to speech	3	left to right	right	2211
12	37	mocap	mocap	text to speech	recording	7	left to right	right	1865
12	38	reduced	mocap	processed	processed	5	left to right	right	870
12	39	reduced	still	text to speech	text to speech	1	left to right	left	953
12	40	reduced	still	recording	text to speech	1	left to right	left	936
12	41	mocap	mocap	text to speech	processed	5	left to right	right	871
12	42	reduced	still	processed	text to speech	1	left to right	left	1201

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
12	43	still	mocap	text to speech	recording	7	left to right	right	837
12	44	reduced	still	recording	processed	3	left to right	right	1102
12	45	mocap	reduced	text to speech	text to speech	7	left to right	left	855
12	46	still	reduced	processed	recording	1	left to right	right	1881
12	47	mocap	reduced	processed	text to speech	8	right to left	left	870
12	48	mocap	mocap	processed	text to speech	5	left to right	left	936
12	49	still	mocap	text to speech	text to speech	4	right to left	left	870
12	50	reduced	reduced	processed	recording	2	right to left	left	837
12	51	still	still	recording	processed	3	left to right	right	952
12	52	reduced	mocap	text to speech	recording	8	right to left	right	854
12	53	still	reduced	text to speech	recording	2	right to left	right	1466
12	54	still	reduced	text to speech	processed	7	left to right	right	837
12	55	reduced	mocap	recording	recording	7	left to right	left	870
12	56	reduced	still	processed	processed	3	left to right	right	920
12	57	reduced	mocap	text to speech	processed	6	right to left	right	903
12	58	mocap	still	text to speech	processed	4	right to left	right	936
12	59	mocap	mocap	processed	recording	7	left to right	left	906
12	60	reduced	mocap	recording	processed	6	right to left	right	870
12	61	mocap	still	processed	processed	3	left to right	right	953
12	62	reduced	mocap	recording	processed	5	left to right	right	821
12	63	reduced	mocap	text to speech	text to speech	4	right to left	right	1848
12	64	still	reduced	recording	recording	1	left to right	right	1102
12	65	mocap	reduced	processed	text to speech	7	left to right	left	820
12	66	mocap	reduced	recording	recording	4	right to left	right	1748
12	67	mocap	still	processed	processed	4	right to left	left	804
12	68	reduced	still	recording	recording	6	right to left	left	903
12	69	mocap	still	recording	recording	5	left to right	right	821
12	70	mocap	reduced	recording	text to speech	7	left to right	left	854
12	71	mocap	reduced	text to speech	processed	1	left to right	right	853
12	72	reduced	still	recording	recording	5	left to right	left	804
12	73	mocap	still	recording	processed	4	right to left	left	920
12	74	mocap	mocap	text to speech	processed	6	right to left	right	1085
12	75	mocap	still	recording	text to speech	1	left to right	left	970
12	76	reduced	mocap	processed	recording	8	right to left	left	1500
12	77	reduced	still	text to speech	recording	5	left to right	left	1035
12	78	mocap	still	text to speech	processed	3	left to right	left	1086
12	79	still	mocap	processed	recording	7	left to right	left	803
12	80	reduced	reduced	recording	text to speech	7	left to right	left	1003
12	81	reduced	still	processed	text to speech	2	right to left	left	870
12	82	mocap	mocap	recording	processed	8	right to left	right	837
12	83	reduced	reduced	recording	processed	1	left to right	right	920
12	84	still	reduced	recording	recording	2	right to left	left	804
12	85	still	mocap	text to speech	processed	5	left to right	right	820
12	86	still	mocap	recording	recording	8	right to left	right	905
12	87	reduced	reduced	text to speech	recording	2	right to left	right	820
12	88	still	mocap	processed	recording	8	right to left	left	837
12	89	reduced	still	text to speech	processed	4	right to left	right	837
12	90	mocap	still	text to speech	recording	6	right to left	right	837
12	91	still	still	text to speech	recording	3	left to right	right	870
12	92	reduced	mocap	processed	text to speech	4	right to left	left	803
12	93	mocap	still	recording	recording	6	right to left	left	853
12	94	reduced	reduced	text to speech	recording	1	left to right	right	953
12	95	mocap	mocap	recording	text to speech	6	right to left	left	787
12	96	still	reduced	recording	text to speech	5	left to right	left	936
12	97	reduced	mocap	text to speech	recording	7	left to right	right	820
12	98	mocap	still	recording	processed	3	left to right	left	804
12	99	still	reduced	recording	text to speech	6	right to left	left	803
12	100	mocap	mocap	processed	recording	8	right to left	left	820
12	101	mocap	reduced	recording	processed	2	right to left	right	1367
12	102	mocap	mocap	text to speech	recording	8	right to left	right	837

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
12	103	still	mocap	text to speech	processed	6	right to left	right	887
12	104	mocap	still	text to speech	text to speech	2	right to left	left	853
12	105	reduced	mocap	processed	text to speech	3	left to right	left	886
12	106	still	mocap	processed	text to speech	3	left to right	left	953
12	107	reduced	still	recording	text to speech	2	right to left	left	803
12	108	reduced	mocap	recording	text to speech	4	right to left	left	1019
12	109	mocap	still	processed	text to speech	1	left to right	left	788
12	110	still	reduced	processed	processed	8	right to left	right	837
12	111	still	mocap	recording	processed	6	right to left	right	787
12	112	still	still	text to speech	processed	2	right to left	right	853
12	113	still	still	recording	text to speech	2	right to left	left	870
12	114	reduced	mocap	processed	recording	7	left to right	left	804
12	115	still	reduced	processed	recording	2	right to left	left	803
12	116	still	reduced	recording	processed	8	right to left	right	803
12	117	still	mocap	processed	text to speech	4	right to left	left	787
12	118	reduced	still	processed	recording	6	right to left	left	853
12	119	mocap	still	processed	recording	6	right to left	left	853
12	120	mocap	reduced	text to speech	recording	4	right to left	right	870
12	121	still	mocap	processed	processed	5	left to right	right	804
12	122	reduced	still	text to speech	text to speech	2	right to left	left	1218
12	123	mocap	reduced	processed	recording	3	left to right	right	804
12	124	mocap	still	recording	text to speech	2	right to left	left	804
12	125	mocap	reduced	recording	text to speech	8	right to left	left	821
12	126	still	still	processed	recording	3	left to right	right	787
12	127	mocap	reduced	processed	processed	2	right to left	left	837
12	128	still	mocap	recording	text to speech	4	right to left	left	870
12	129	reduced	mocap	recording	recording	8	right to left	left	837
12	130	mocap	mocap	processed	text to speech	6	right to left	left	1748
12	131	reduced	reduced	recording	processed	2	right to left	right	787
12	132	still	reduced	processed	text to speech	5	left to right	left	1185
12	133	still	mocap	recording	processed	5	left to right	right	836
12	134	mocap	reduced	recording	processed	1	left to right	right	837
12	135	reduced	reduced	processed	text to speech	7	left to right	left	820
12	136	reduced	still	processed	recording	5	left to right	left	837
12	137	mocap	reduced	processed	recording	4	right to left	left	870
12	138	still	still	processed	text to speech	2	right to left	left	754
12	139	still	mocap	recording	recording	7	left to right	right	854
12	140	still	reduced	processed	processed	7	left to right	right	821
12	141	mocap	reduced	text to speech	recording	3	left to right	left	2775
12	142	still	reduced	text to speech	recording	1	left to right	right	1168
12	143	reduced	still	text to speech	recording	6	right to left	right	804
13	0	reduced	still	processed	recording	6	right to left	right	192
13	1	reduced	reduced	text to speech	recording	1	left to right	right	2593
13	2	still	mocap	text to speech	recording	7	left to right	left	1217
13	3	reduced	reduced	processed	text to speech	8	right to left	right	1168
13	4	mocap	mocap	processed	recording	8	right to left	right	1103
13	5	mocap	still	recording	recording	5	left to right	right	522
13	6	reduced	mocap	recording	recording	7	left to right	left	1283
13	7	still	reduced	recording	recording	2	right to left	right	738
13	8	still	mocap	recording	recording	8	right to left	right	5807
13	9	still	reduced	recording	recording	1	left to right	left	191
13	10	still	mocap	text to speech	processed	5	left to right	left	522
13	11	reduced	reduced	recording	text to speech	8	right to left	right	1284
13	12	reduced	still	text to speech	recording	5	left to right	left	522
13	13	mocap	reduced	recording	recording	3	left to right	right	1085
13	14	mocap	mocap	text to speech	recording	8	right to left	left	1715
13	15	still	reduced	recording	processed	7	left to right	left	10827
13	16	reduced	mocap	text to speech	recording	8	right to left	left	523
13	17	still	reduced	text to speech	text to speech	5	left to right	right	11456
13	18	still	mocap	recording	text to speech	3	left to right	left	11198

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
13	19	still	mocap	processed	processed	6	right to left	left	803
13	20	mocap	mocap	recording	processed	8	right to left	right	1184
13	21	mocap	mocap	text to speech	processed	6	right to left	left	523
13	22	still	mocap	recording	recording	7	left to right	right	522
13	23	reduced	reduced	recording	processed	1	left to right	left	489
13	24	still	still	recording	processed	4	right to left	left	522
13	25	reduced	mocap	recording	processed	6	right to left	right	1235
13	26	mocap	still	text to speech	recording	5	left to right	left	523
13	27	reduced	mocap	processed	processed	6	right to left	left	1102
13	28	still	reduced	processed	processed	8	right to left	right	522
13	29	still	reduced	recording	processed	8	right to left	right	1930
13	30	mocap	still	recording	recording	6	right to left	right	192
13	31	mocap	still	recording	text to speech	1	left to right	right	523
13	32	reduced	mocap	recording	text to speech	4	right to left	right	1135
13	33	mocap	still	recording	processed	3	left to right	left	522
13	34	mocap	reduced	text to speech	text to speech	8	right to left	left	936
13	35	still	still	processed	recording	3	left to right	right	605
13	36	mocap	reduced	processed	text to speech	8	right to left	right	3454
13	37	mocap	reduced	text to speech	processed	2	right to left	left	969
13	38	mocap	reduced	processed	processed	1	left to right	left	522
13	39	reduced	still	text to speech	text to speech	2	right to left	left	4946
13	40	still	reduced	processed	text to speech	6	right to left	right	522
13	41	mocap	reduced	recording	text to speech	7	left to right	left	2013
13	42	reduced	mocap	text to speech	processed	5	left to right	left	1201
13	43	still	mocap	processed	recording	8	right to left	right	1168
13	44	reduced	mocap	text to speech	processed	6	right to left	right	523
13	45	mocap	still	processed	processed	3	left to right	right	1068
13	46	mocap	mocap	text to speech	processed	5	left to right	left	522
13	47	reduced	mocap	text to speech	text to speech	3	left to right	right	522
13	48	still	reduced	text to speech	processed	8	right to left	left	522
13	49	still	mocap	recording	text to speech	4	right to left	right	1698
13	50	reduced	mocap	text to speech	text to speech	4	right to left	right	3322
13	51	still	reduced	recording	text to speech	5	left to right	right	919
13	52	reduced	still	recording	processed	4	right to left	left	1217
13	53	reduced	still	recording	recording	6	right to left	left	523
13	54	still	mocap	text to speech	text to speech	4	right to left	left	638
13	55	reduced	reduced	processed	recording	2	right to left	right	1350
13	56	mocap	reduced	text to speech	text to speech	7	left to right	right	2079
13	57	reduced	reduced	recording	text to speech	7	left to right	left	523
13	58	mocap	mocap	processed	recording	7	left to right	left	1152
13	59	still	reduced	processed	text to speech	5	left to right	right	836
13	60	still	mocap	text to speech	recording	8	right to left	left	985
13	61	reduced	mocap	text to speech	recording	7	left to right	left	522
13	62	still	reduced	processed	processed	7	left to right	right	522
13	63	still	still	text to speech	recording	4	right to left	right	1085
13	64	reduced	still	text to speech	text to speech	1	left to right	left	1251
13	65	mocap	mocap	recording	text to speech	5	left to right	right	1168
13	66	still	reduced	processed	recording	2	right to left	right	870
13	67	mocap	still	text to speech	recording	6	right to left	left	671
13	68	still	still	text to speech	processed	2	right to left	left	1665
13	69	reduced	still	processed	processed	4	right to left	left	1003
13	70	reduced	still	recording	processed	3	left to right	left	1152
13	71	reduced	still	text to speech	recording	6	right to left	right	3471
13	72	mocap	reduced	text to speech	recording	4	right to left	right	1052
13	73	mocap	reduced	processed	recording	3	left to right	right	1865
13	74	still	reduced	text to speech	recording	1	left to right	left	2841
13	75	mocap	still	text to speech	text to speech	1	left to right	right	2211
13	76	mocap	reduced	recording	processed	2	right to left	right	1599
13	77	mocap	reduced	processed	processed	2	right to left	right	1914
13	78	still	reduced	text to speech	processed	7	left to right	right	3106

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
13	79	mocap	still	text to speech	text to speech	2	right to left	right	522
13	80	reduced	still	processed	text to speech	2	right to left	right	3406
13	81	reduced	reduced	text to speech	recording	2	right to left	right	1317
13	82	mocap	still	text to speech	processed	3	left to right	left	2113
13	83	mocap	mocap	processed	text to speech	5	left to right	right	2129
13	84	mocap	still	processed	text to speech	2	right to left	right	1019
13	85	mocap	still	text to speech	processed	4	right to left	right	5839
13	86	still	mocap	recording	processed	6	right to left	right	522
13	89	still	still	processed	text to speech	2	right to left	right	522
13	90	reduced	mocap	processed	recording	7	left to right	right	1085
13	91	reduced	mocap	recording	processed	5	left to right	right	1118
13	92	reduced	still	processed	processed	3	left to right	left	1119
13	93	still	reduced	processed	recording	1	left to right	left	1682
13	94	mocap	reduced	recording	recording	4	right to left	right	1037
13	95	still	mocap	processed	text to speech	3	left to right	left	522
13	96	reduced	mocap	processed	text to speech	3	left to right	left	526
13	97	mocap	reduced	text to speech	recording	3	left to right	right	1532
13	98	still	mocap	text to speech	text to speech	3	left to right	left	523
13	99	reduced	still	text to speech	processed	4	right to left	left	986
13	100	still	still	recording	text to speech	2	right to left	right	836
13	101	mocap	mocap	recording	text to speech	6	right to left	right	1582
13	102	reduced	still	recording	text to speech	2	right to left	right	1068
13	103	mocap	still	processed	recording	6	right to left	right	1338
13	104	still	reduced	text to speech	text to speech	6	right to left	right	1665
13	105	mocap	still	processed	processed	4	right to left	right	969
13	106	mocap	still	recording	processed	4	right to left	left	936
13	107	reduced	still	recording	text to speech	1	left to right	right	1716
13	108	still	reduced	recording	text to speech	6	right to left	right	836
13	109	still	still	recording	text to speech	1	left to right	right	1217
13	110	still	still	processed	text to speech	1	left to right	right	1367
13	111	reduced	still	processed	recording	5	left to right	left	1118
13	112	reduced	reduced	text to speech	processed	7	left to right	left	523
13	113	still	still	processed	recording	4	right to left	right	1151
13	114	reduced	mocap	processed	processed	5	left to right	left	2162
13	115	reduced	reduced	text to speech	processed	8	right to left	right	1052
13	116	mocap	still	processed	text to speech	1	left to right	right	2444
13	117	mocap	reduced	text to speech	processed	1	left to right	right	1118
13	118	reduced	mocap	processed	text to speech	4	right to left	right	1020
13	119	reduced	reduced	recording	processed	2	right to left	right	770
13	120	still	still	recording	processed	3	left to right	left	1268
13	121	mocap	reduced	recording	processed	1	left to right	left	2559
13	122	still	mocap	text to speech	processed	6	right to left	right	1006
13	123	reduced	mocap	recording	text to speech	3	left to right	left	522
13	124	mocap	mocap	recording	processed	7	left to right	left	1383
13	125	mocap	reduced	processed	recording	4	right to left	right	688
13	126	still	still	text to speech	recording	3	left to right	right	1053
13	127	reduced	still	recording	recording	5	left to right	left	986
13	128	mocap	reduced	recording	text to speech	8	right to left	right	1118
13	129	still	mocap	processed	processed	5	left to right	left	1019
13	130	reduced	still	processed	text to speech	1	left to right	left	971
13	131	reduced	reduced	processed	recording	1	left to right	left	837
13	132	still	mocap	recording	processed	5	left to right	left	820
13	133	mocap	still	processed	recording	5	left to right	right	903
13	134	mocap	still	recording	text to speech	2	right to left	left	1035
13	135	mocap	reduced	processed	text to speech	7	left to right	left	1135
13	136	still	mocap	processed	recording	7	left to right	right	1003
13	137	mocap	mocap	text to speech	recording	7	left to right	right	820
13	138	still	reduced	text to speech	recording	2	right to left	right	853
13	139	reduced	mocap	processed	recording	8	right to left	right	952
13	140	mocap	mocap	processed	text to speech	6	right to left	right	903

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
13	141	reduced	mocap	recording	recording	8	right to left	right	1002
13	142	still	mocap	processed	text to speech	4	right to left	right	869
13	143	reduced	reduced	processed	text to speech	7	left to right	right	919
14	0	reduced	reduced	text to speech	processed	7	left to right	left	1301
14	1	reduced	reduced	text to speech	recording	2	right to left	right	1135
14	2	mocap	still	processed	processed	4	right to left	left	1268
14	3	reduced	mocap	recording	text to speech	4	right to left	left	539
14	4	still	reduced	recording	text to speech	6	right to left	left	1135
14	5	reduced	mocap	processed	processed	6	right to left	left	1549
14	6	reduced	mocap	text to speech	processed	6	right to left	right	1101
14	7	still	mocap	recording	text to speech	4	right to left	left	1135
14	8	mocap	reduced	processed	recording	4	right to left	right	952
14	9	reduced	mocap	processed	recording	7	left to right	right	591
14	10	still	reduced	processed	processed	7	left to right	right	1070
14	11	reduced	still	text to speech	processed	3	left to right	right	869
14	12	mocap	mocap	recording	text to speech	5	left to right	left	853
14	13	still	still	text to speech	processed	1	left to right	left	952
14	14	reduced	still	recording	recording	5	left to right	right	1118
14	15	still	still	processed	text to speech	1	left to right	right	1236
14	16	reduced	still	processed	text to speech	1	left to right	right	522
14	17	mocap	still	recording	recording	6	right to left	right	953
14	18	still	mocap	text to speech	processed	6	right to left	right	522
14	19	reduced	still	text to speech	recording	5	left to right	right	1068
14	20	mocap	still	text to speech	text to speech	1	left to right	right	770
14	21	reduced	mocap	recording	recording	8	right to left	left	1003
14	22	reduced	reduced	recording	processed	2	right to left	left	870
14	23	reduced	still	text to speech	text to speech	2	right to left	left	920
14	24	mocap	reduced	processed	text to speech	7	left to right	left	571
14	25	mocap	reduced	text to speech	text to speech	8	right to left	left	1201
14	26	still	reduced	recording	recording	1	left to right	right	1201
14	27	mocap	reduced	recording	processed	1	left to right	left	870
14	28	reduced	reduced	processed	recording	1	left to right	right	1069
14	29	still	mocap	text to speech	text to speech	4	right to left	left	903
14	30	mocap	still	text to speech	processed	4	right to left	left	1035
14	31	still	reduced	text to speech	recording	1	left to right	right	1285
14	32	still	mocap	processed	recording	7	left to right	right	1018
14	33	still	mocap	recording	processed	6	right to left	left	1003
14	34	still	still	text to speech	processed	2	right to left	left	985
14	35	mocap	still	processed	processed	3	left to right	right	555
14	36	still	reduced	text to speech	recording	2	right to left	right	2062
14	37	reduced	still	processed	processed	3	left to right	left	1433
14	38	mocap	reduced	recording	text to speech	8	right to left	left	1052
14	39	mocap	still	text to speech	recording	5	left to right	right	1020
14	40	reduced	reduced	text to speech	recording	1	left to right	left	820
14	41	mocap	reduced	processed	processed	1	left to right	left	1002
14	42	still	mocap	text to speech	recording	7	left to right	right	1201
14	43	mocap	reduced	recording	recording	4	right to left	right	1020
14	44	reduced	still	processed	text to speech	2	right to left	right	887
14	45	mocap	reduced	text to speech	text to speech	7	left to right	left	853
14	46	reduced	still	recording	recording	6	right to left	left	1135
14	47	still	still	recording	processed	3	left to right	left	903
14	48	still	still	recording	processed	4	right to left	left	523
14	49	still	mocap	processed	processed	5	left to right	left	2228
14	50	reduced	still	processed	recording	6	right to left	right	939
14	51	mocap	still	recording	recording	5	left to right	right	1317
14	52	still	mocap	text to speech	text to speech	3	left to right	right	1134
14	53	still	mocap	processed	text to speech	3	left to right	right	853
14	54	reduced	reduced	recording	text to speech	7	left to right	left	1069
14	55	mocap	mocap	recording	text to speech	6	right to left	left	1135
14	56	reduced	mocap	text to speech	recording	8	right to left	right	903

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
14	57	still	still	processed	recording	3	left to right	right	935
14	58	still	still	recording	text to speech	1	left to right	right	969
14	59	reduced	reduced	processed	recording	2	right to left	right	2361
14	60	still	reduced	recording	processed	7	left to right	left	522
14	61	still	reduced	processed	recording	1	left to right	right	936
14	62	reduced	still	text to speech	processed	4	right to left	right	919
14	63	still	mocap	recording	processed	5	left to right	left	1069
14	64	reduced	mocap	processed	text to speech	4	right to left	right	853
14	65	still	reduced	processed	text to speech	6	right to left	left	1465
14	66	still	still	processed	recording	4	right to left	right	886
14	67	still	still	recording	text to speech	2	right to left	left	886
14	68	mocap	reduced	text to speech	recording	4	right to left	right	1052
14	69	mocap	reduced	processed	text to speech	8	right to left	right	1119
14	70	mocap	mocap	text to speech	processed	6	right to left	left	969
14	71	still	still	text to speech	recording	4	right to left	left	870
14	72	mocap	still	processed	text to speech	2	right to left	right	688
14	73	still	reduced	text to speech	processed	7	left to right	left	920
14	74	mocap	still	recording	processed	3	left to right	left	1218
14	75	still	still	processed	text to speech	2	right to left	left	1499
14	76	reduced	still	recording	text to speech	1	left to right	left	870
14	77	reduced	mocap	recording	recording	7	left to right	right	1201
14	78	still	reduced	text to speech	text to speech	5	left to right	right	1085
14	79	reduced	reduced	recording	text to speech	8	right to left	right	1052
14	80	mocap	mocap	processed	recording	8	right to left	right	804
14	81	mocap	still	recording	text to speech	1	left to right	right	904
14	82	mocap	still	text to speech	recording	6	right to left	left	969
14	83	still	mocap	recording	text to speech	3	left to right	left	1019
14	84	reduced	mocap	processed	text to speech	3	left to right	right	870
14	85	still	mocap	processed	text to speech	4	right to left	right	1069
14	86	mocap	still	processed	text to speech	1	left to right	right	986
14	87	mocap	still	text to speech	text to speech	2	right to left	right	1019
14	88	mocap	reduced	recording	recording	3	left to right	right	1118
14	89	reduced	still	text to speech	recording	6	right to left	left	920
14	90	reduced	mocap	text to speech	processed	5	left to right	left	870
14	91	reduced	still	recording	text to speech	2	right to left	left	870
14	92	reduced	still	recording	processed	4	right to left	left	903
14	93	mocap	reduced	recording	processed	2	right to left	left	836
14	94	still	reduced	recording	recording	2	right to left	left	1566
14	95	reduced	mocap	processed	processed	5	left to right	left	837
14	96	still	reduced	processed	recording	2	right to left	right	737
14	97	reduced	mocap	text to speech	recording	7	left to right	right	837
14	98	mocap	reduced	text to speech	processed	2	right to left	left	969
14	99	still	reduced	text to speech	text to speech	6	right to left	left	1069
14	100	mocap	mocap	recording	processed	8	right to left	right	886
14	101	reduced	mocap	recording	text to speech	3	left to right	left	870
14	102	reduced	mocap	processed	recording	8	right to left	right	953
14	103	still	mocap	text to speech	recording	8	right to left	right	853
14	104	reduced	still	processed	recording	5	left to right	right	870
14	105	mocap	reduced	processed	recording	3	left to right	right	936
14	106	still	mocap	text to speech	processed	5	left to right	left	1019
14	107	still	reduced	recording	processed	8	right to left	left	837
14	108	still	still	text to speech	recording	3	left to right	right	522
14	109	still	reduced	processed	text to speech	5	left to right	left	886
14	110	reduced	still	processed	processed	4	right to left	right	820
14	111	mocap	reduced	text to speech	processed	1	left to right	left	921
14	112	still	reduced	text to speech	processed	8	right to left	left	903
14	113	still	mocap	processed	recording	8	right to left	right	886
14	114	mocap	still	recording	text to speech	2	right to left	left	920
14	115	reduced	mocap	text to speech	text to speech	3	left to right	right	886
14	116	reduced	still	recording	processed	3	left to right	left	936

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
14	117	mocap	mocap	processed	recording	7	left to right	right	804
14	118	still	mocap	recording	recording	8	right to left	right	936
14	119	reduced	still	text to speech	text to speech	1	left to right	right	903
14	120	mocap	mocap	text to speech	recording	8	right to left	right	522
14	121	mocap	still	processed	recording	6	right to left	right	1018
14	122	still	mocap	recording	recording	7	left to right	right	836
14	123	mocap	still	recording	processed	4	right to left	right	1201
14	124	reduced	reduced	processed	text to speech	7	left to right	left	903
14	125	mocap	mocap	recording	processed	7	left to right	left	836
14	126	mocap	reduced	text to speech	recording	3	left to right	right	952
14	127	reduced	reduced	recording	processed	1	left to right	left	836
14	128	reduced	mocap	recording	processed	6	right to left	left	903
14	129	mocap	reduced	recording	text to speech	7	left to right	left	853
14	130	still	reduced	recording	text to speech	5	left to right	left	920
14	131	reduced	mocap	text to speech	text to speech	4	right to left	left	870
14	132	reduced	reduced	text to speech	processed	8	right to left	left	837
14	133	mocap	mocap	text to speech	recording	7	left to right	right	870
14	134	mocap	mocap	processed	text to speech	5	left to right	right	886
14	135	mocap	mocap	text to speech	processed	5	left to right	left	1036
14	136	still	reduced	processed	processed	8	right to left	left	887
14	137	mocap	still	processed	recording	5	left to right	right	1002
14	138	mocap	reduced	processed	processed	2	right to left	left	870
14	139	mocap	mocap	processed	text to speech	6	right to left	right	936
14	140	reduced	reduced	processed	text to speech	8	right to left	right	903
14	141	mocap	still	text to speech	processed	3	left to right	left	870
14	142	reduced	mocap	recording	processed	5	left to right	left	820
14	143	still	mocap	processed	processed	6	right to left	right	637
15	0	mocap	still	text to speech	processed	4	right to left	right	5625
15	1	mocap	still	text to speech	text to speech	2	right to left	left	1599
15	2	mocap	mocap	recording	processed	7	left to right	left	522
15	3	mocap	mocap	processed	recording	8	right to left	right	9352
15	4	reduced	mocap	processed	recording	8	right to left	right	1035
15	5	mocap	still	recording	text to speech	1	left to right	left	1218
15	6	still	reduced	recording	text to speech	5	left to right	left	1748
15	7	still	mocap	text to speech	processed	5	left to right	left	523
15	8	reduced	mocap	recording	processed	6	right to left	left	2228
15	9	reduced	still	recording	text to speech	2	right to left	left	2957
15	10	still	mocap	processed	recording	8	right to left	right	523
15	11	mocap	reduced	recording	processed	1	left to right	right	3106
15	12	still	reduced	processed	text to speech	6	right to left	right	3222
15	13	still	reduced	text to speech	processed	8	right to left	left	1582
15	14	mocap	still	text to speech	text to speech	1	left to right	left	523
15	15	still	reduced	text to speech	recording	2	right to left	right	2923
15	16	reduced	reduced	processed	recording	1	left to right	right	522
15	17	mocap	still	text to speech	recording	5	left to right	left	4779
15	18	still	still	recording	processed	3	left to right	left	522
15	19	mocap	still	processed	text to speech	2	right to left	left	936
15	20	reduced	still	recording	recording	6	right to left	left	687
15	21	reduced	still	processed	recording	5	left to right	left	522
15	22	still	mocap	recording	processed	6	right to left	right	1300
15	23	reduced	reduced	recording	text to speech	8	right to left	left	1052
15	24	still	mocap	processed	text to speech	4	right to left	right	704
15	25	still	mocap	recording	recording	7	left to right	right	1665
15	26	mocap	mocap	text to speech	recording	8	right to left	right	786
15	27	mocap	mocap	processed	text to speech	6	right to left	right	1764
15	28	still	reduced	processed	processed	8	right to left	right	870
15	29	reduced	mocap	text to speech	recording	7	left to right	right	588
15	30	mocap	still	processed	recording	6	right to left	left	1781
15	31	still	mocap	recording	text to speech	4	right to left	left	988
15	32	mocap	still	recording	processed	3	left to right	left	836

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
15	33	reduced	reduced	text to speech	processed	8	right to left	right	1615
15	34	reduced	still	text to speech	processed	4	right to left	left	2261
15	35	still	reduced	text to speech	text to speech	5	left to right	right	804
15	36	still	reduced	processed	text to speech	5	left to right	right	787
15	37	still	mocap	text to speech	processed	6	right to left	right	870
15	38	reduced	mocap	text to speech	text to speech	3	left to right	left	1184
15	39	mocap	mocap	processed	text to speech	5	left to right	right	1632
15	40	reduced	mocap	recording	text to speech	3	left to right	left	1252
15	41	reduced	still	recording	processed	4	right to left	left	804
15	42	still	still	processed	text to speech	2	right to left	left	969
15	43	reduced	mocap	text to speech	recording	8	right to left	right	853
15	44	mocap	reduced	text to speech	processed	2	right to left	left	1930
15	45	still	reduced	processed	recording	1	left to right	right	2129
15	46	mocap	mocap	text to speech	recording	7	left to right	right	803
15	47	still	mocap	recording	text to speech	3	left to right	right	1235
15	48	mocap	mocap	text to speech	processed	5	left to right	left	1185
15	49	mocap	still	text to speech	processed	3	left to right	left	787
15	50	still	mocap	text to speech	recording	8	right to left	right	836
15	51	reduced	reduced	processed	text to speech	7	left to right	left	1052
15	52	mocap	mocap	processed	recording	7	left to right	right	853
15	53	still	reduced	processed	recording	2	right to left	right	804
15	54	mocap	still	text to speech	recording	6	right to left	right	1416
15	55	mocap	mocap	recording	text to speech	5	left to right	right	4299
15	56	mocap	still	recording	recording	6	right to left	left	1152
15	57	still	still	recording	processed	4	right to left	left	1019
15	58	reduced	reduced	recording	text to speech	7	left to right	left	820
15	59	reduced	reduced	text to speech	recording	1	left to right	right	886
15	60	mocap	reduced	text to speech	recording	3	left to right	right	1052
15	61	still	mocap	text to speech	text to speech	4	right to left	right	837
15	62	still	mocap	processed	recording	7	left to right	right	1665
15	63	still	reduced	text to speech	text to speech	6	right to left	right	804
15	64	still	reduced	recording	text to speech	6	right to left	right	935
15	65	reduced	still	processed	text to speech	2	right to left	left	853
15	66	still	mocap	processed	processed	5	left to right	right	871
15	67	mocap	still	processed	processed	4	right to left	left	969
15	68	mocap	reduced	processed	processed	2	right to left	left	1005
15	69	reduced	mocap	recording	processed	5	left to right	left	1268
15	70	mocap	reduced	text to speech	text to speech	7	left to right	left	1219
15	71	mocap	reduced	text to speech	recording	4	right to left	right	523
15	72	reduced	still	processed	processed	4	right to left	left	886
15	73	still	still	processed	recording	4	right to left	right	986
15	74	still	reduced	recording	recording	1	left to right	right	853
15	75	reduced	mocap	processed	recording	7	left to right	right	1052
15	76	reduced	still	text to speech	text to speech	2	right to left	left	837
15	77	reduced	reduced	text to speech	recording	2	right to left	right	1731
15	78	reduced	mocap	recording	text to speech	4	right to left	left	1267
15	79	reduced	mocap	processed	text to speech	3	left to right	right	1036
15	80	mocap	reduced	recording	text to speech	8	right to left	left	1118
15	81	still	mocap	text to speech	recording	7	left to right	right	903
15	82	still	still	processed	recording	3	left to right	right	1383
15	83	reduced	mocap	recording	recording	8	right to left	left	986
15	84	reduced	still	text to speech	recording	5	left to right	right	919
15	85	still	still	text to speech	processed	1	left to right	left	837
15	86	reduced	mocap	recording	recording	7	left to right	right	869
15	87	mocap	reduced	recording	text to speech	7	left to right	left	1649
15	88	mocap	reduced	processed	text to speech	7	left to right	left	870
15	89	mocap	reduced	text to speech	processed	1	left to right	left	2477
15	90	still	reduced	text to speech	processed	7	left to right	right	1980
15	91	mocap	reduced	processed	recording	4	right to left	right	870
15	92	mocap	still	recording	text to speech	2	right to left	left	953

subject id	trial id	body left	body right	speech left	speech right	sentence	order	choice	duration
15	93	reduced	still	recording	processed	3	left to right	left	953
15	94	reduced	still	processed	recording	6	right to left	left	1085
15	95	reduced	reduced	processed	text to speech	8	right to left	left	870
15	96	still	mocap	recording	processed	5	left to right	right	1036
15	97	reduced	still	recording	text to speech	1	left to right	left	886
15	98	reduced	still	recording	recording	5	left to right	left	886
15	99	reduced	reduced	text to speech	processed	7	left to right	left	3653
15	100	mocap	still	recording	recording	5	left to right	left	820
15	101	still	mocap	recording	recording	8	right to left	right	853
15	102	still	still	processed	text to speech	1	left to right	right	787
15	103	mocap	still	recording	processed	4	right to left	left	770
15	104	still	mocap	processed	processed	6	right to left	right	621
15	105	mocap	still	processed	processed	3	left to right	left	771
15	106	still	still	text to speech	recording	3	left to right	right	987
15	107	mocap	reduced	recording	recording	3	left to right	right	820
15	108	mocap	reduced	recording	recording	4	right to left	left	837
15	109	reduced	mocap	text to speech	text to speech	4	right to left	right	870
15	110	reduced	mocap	text to speech	processed	6	right to left	left	687
15	111	mocap	mocap	text to speech	processed	6	right to left	left	1036
15	112	reduced	reduced	recording	processed	1	left to right	left	1019
15	113	still	reduced	text to speech	recording	1	left to right	right	2610
15	114	reduced	reduced	recording	processed	2	right to left	left	952
15	115	mocap	mocap	recording	processed	8	right to left	left	821
15	116	still	reduced	processed	processed	7	left to right	right	886
15	117	mocap	reduced	recording	processed	2	right to left	left	853
15	118	reduced	still	processed	processed	3	left to right	left	903
15	119	mocap	reduced	processed	recording	3	left to right	right	3240
15	120	still	reduced	recording	processed	8	right to left	right	986
15	121	reduced	mocap	text to speech	processed	5	left to right	left	820
15	122	still	reduced	recording	processed	7	left to right	right	787
15	123	reduced	still	text to speech	recording	6	right to left	left	4050
15	124	reduced	mocap	processed	text to speech	4	right to left	right	2327
15	125	mocap	reduced	processed	processed	1	left to right	left	854
15	126	still	still	text to speech	processed	2	right to left	left	3421
15	127	reduced	still	text to speech	text to speech	1	left to right	left	1434
15	128	still	mocap	text to speech	text to speech	3	left to right	right	1334
15	129	mocap	mocap	recording	text to speech	6	right to left	left	523
15	130	still	still	recording	text to speech	1	left to right	right	2642
15	131	mocap	reduced	processed	text to speech	8	right to left	right	523
15	132	still	mocap	processed	text to speech	3	left to right	right	953
15	133	mocap	still	processed	text to speech	1	left to right	left	1813
15	134	still	reduced	recording	recording	2	right to left	right	638
15	135	mocap	reduced	text to speech	text to speech	8	right to left	left	1864
15	136	still	still	text to speech	recording	4	right to left	right	1101
15	137	still	still	recording	text to speech	2	right to left	left	1384
15	138	reduced	reduced	processed	recording	2	right to left	right	1102
15	139	mocap	still	processed	recording	5	left to right	left	1219
15	140	reduced	mocap	processed	processed	6	right to left	right	522
15	141	reduced	still	text to speech	processed	3	left to right	left	1135
15	142	reduced	still	processed	text to speech	1	left to right	left	903
15	143	reduced	mocap	processed	processed	5	left to right	right	1384