

Making Sense of Video Instruction: An Ethnomethodological Analysis of Following a YouTube

Croissant Making Tutorial

By

Marissa Panton

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Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners. I understand that my thesis may be made electronically available to the public.

Abstract

With the use of video instruction becoming more prevalent, this thesis looks at the methods learners use to navigate video tutorials through an ethnomethodological lens. As ethnomethodology is concerned with the way members of society, together, make sense of everyday situations, the way users make sense of video instruction, compared to other mediums of instruction, is an important ethnomethodological question. Using auto-ethnographic video recordings and multi-modal transcription methods, this thesis looks at an instance of a learner using a video tutorial to learn how to make croissants by hand. The auto-ethnographic methods used in this project are designed to attempt to mitigate issues of bias and representation often associated with this form of research, by using various iterations of participant-observation tools. As well, to ethnomethodologically examine the data captured, a multi-modal transcription scheme has been devised, using aspects of established schemes, but with features that are unique to this project. Many of the tasks completed by the learner involve methods of measurement that are either numerical and involve the use of scales or embodied, involving the culturally skilled human body. Acknowledging embodied forms of measurement more comprehensively will benefit studies of video-mediated instructions as well as the production of such instructions.

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The University of Waterloo is situated on the Haldimand Tract, which is land that was promised to the Haudenosaunee of the Six Nations of the Grand River, and is within the territory of the Neutral, Anishinaabe and Haudenosaunee people. As a student of this institution and a local resident, I live, work and study on the land that was promised to these groups on

October 25th, 1784. Recognizing that the eventual secession of land by these groups was non-consensual and fraudulent only begins to describe the wrong doings of settlers and the enduring colonial forces still present today. It is important to acknowledge this fact, as injustices that Indigenous Peoples of Canada face should no longer be historicized, but, rather, recognized as contemporary issues that must be continuously addressed. Coloniality is an ongoing process and this statement alone is not sufficient action to redress this fact. With this, I would like to take the opportunity to commit myself to the fight against long established systems of oppression that have taken away Indigenous Peoples of Canada's land, identity and right to self-governance.

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Chapter 1

Ethnomethodology of Video Instruction's Contribution to Public Issues Anthropology

1.1 Introduction

The goal of this thesis is to examine the use of video instruction from an ethnomethodological perspective, in order to shed light on the methods individuals use to navigate instructions successfully. Video instruction is an important area of study, as more remote forms of social interactions have become necessary due to the global COVID-19 pandemic. Video instruction is also relevant in addressing issues such as reducing carbon emissions due to travel and broadly for the global accessibility of information. Instructions, on the whole, are also important to study, as they guide members of society in how to perform tasks of all kinds. What is left to be seen is what methods users of video instructions use to progress through tutorials and ultimately come out with a product whose success can be gauged. In order to examine these questions, this project uses auto-ethnographic methods and multi-perspective video recordings of an individual using an internet video tutorial to learn how to make croissants for the first time. With this data, the emerging methods the user implements to follow the video tutorial and subsequent implications for video instruction as a whole will be discussed. The use of auto ethnography as a research method and its relationship to ethnomethodology will also be discussed.

This first chapter looks at how an ethnomethodological analysis of video instruction can and should be situated within the field of "Public Issues Anthropology". The public is inherently captured in many ethnomethodological studies, as it looks at how members of the public produce and maintain social order together, not in theory, but in practice. More specifically, by

considering that individuals are using video instruction, not in theory, but in practice, the practical methods and (mis)understandings that they encounter contribute to a more genuine description of what this particular aspect of life is like for the public.

1.2 Public Issues Anthropology

An important question that can get overlooked within academia is, “how can academic work be relevant to the public?” This is a key question to ask, particularly in anthropology, whose work deals so closely with people. If anthropology exists due to the information people provide to anthropologists, then it stands to reason that these people, or the public as whole should receive something in return. This idea that anthropology should contribute to the public is advocated for by scholars such as Robert Borofsky (2019), in his book *An Anthropology of Anthropology: Is It Time to Shift Paradigms*. This book looks at what public issues anthropology has been, currently is, and what it has the potential to be. Particularly, Borofsky (2019) notes that simply rejecting anthropology’s old adage of “do no harm”, and replacing it with “do good” is vague and subjective (123). In order to actually contribute to the public in a meaningful and equitable way, anthropologists need to consider what structures and institutions their work is upholding and what their work is actually perpetuating about those that they are studying (Borofsky 2019, 141). This leads into how ethnomethodology can contribute to this task.

1.3 Ethnomethodology and Its Contribution to Public Issues Anthropology

Ethnomethodology is a multifaceted social science approach. Eric Livingston (1987) has defined it as “... the study of the common, everyday naturally-occurring, mundane methods that are used by people to produce and manage the common, everyday activities of the everyday social world - activities like shaking hands, taking turns-at-talk in a conversation, reaching a

verdict, standing-in-line” (10). Where other social scientific approaches are looking to create theories and extrapolate from the specific to the general, ethnomethodology is looking at details of social life in context with far less emphasis on theory. This underemphasis on theory comes from Harold Garfinkel, the founder of ethnomethodology, as he felt that theory distracted from the detailed description of social order (Garfinkel and Rawls 2002, 23). Other ethnomethodologists align with this stance (Francis and Hester 2007, 16), but this is not to say the field is entirely atheoretical. Though Garfinkel rejected theory on the basis that it gave researchers presuppositions on what they were going to find in the field, Garfinkel operated under the rule that members produce mutually recognizable methods to create social order, which itself can be considered a theoretical expectation (Rawls 2008, 709). Ultimately, it is the way ethnomethodologists use theory, to underpin basic ideas of social order, that sets them apart from other social science fields, rather than its total lack of theory (Rawls 2008, 708). With this said, the benefit of ethnomethodology is that any scenario can be studied in the context of the social methods people use to make sense of it. Similarly, as all humans are social actors in one way or another, humans can, therefore, not avoid the phenomena that ethnomethodology studies. From regular conversations (Sacks 1995) to astronomy laboratories (Hoeppe 2014, 2018), ethnomethodology can examine how people actually make sense of these settings and interactions.

As ethnomethodology has the ability to analyze any situation that involves humans carrying out actions, situations that anthropologists typically overlook, but are a very real part of people’s experiences, can be illuminated. Specifically, they can be examined for how they are achieved. The question of “how” often gets pushed aside for “why” in academia, but there can be

no “why” without “how”. In tandem with this, ethnomethodology also has the potential to destabilize the privileged status and point of view of the social scientist. This is due to the fact that everyone, social scientists and the public alike, use “ethnomethods” to co-produce and discern the meaning of situations, with the only distinction being the consciousness of this process for the former. In a similar vein, phenomenologist Tim Ingold (2018) suggests in *Anthropology: Why it Matters*, that the way forward in anthropology is to “take others seriously” as a baseline, and that anthropologists should allow their informants to challenge their perception of the way society functions. Thinking about Ingold’s words in the context of ethnomethodology, ethnomethodologists must inherently “take others seriously”, as they are examining social interactions in practice, not in theory. It is “how” things happen, which is itself an acknowledgement of the existence of a social phenomena, that is important to ethnomethodologists, as it is “observable-and-reportable” (Garfinkel 1967, 1). Further, ethnomethodology focuses on the context in which these social phenomena occur. Overgeneralization of anthropological findings has been advocated against by scholars from different subfields of the discipline (Anawack 1996; Lock and Nguyen 2010), but ethnomethodology, more so than other fields, uses context as one of its fundamental concepts.

1.4 Ethnomethodology of Instruction and Public Issues Anthropology

A situation that is often encountered by people, and that lends itself well to ethnomethodological analysis, is the use of instructions. Instructions are a form of social interaction that come in many forms (Lindwall et al. 2015) and are found in diverse settings. All instructions come with varying levels of detail (Garfinkel 1967). For example, most recipes for cakes list instructions such as what temperature to preheat the oven and how long to mix the

batter for, but seldom do these recipes instruct the user on how to actually preheat the oven or what motions constitute “mixing”. From this perspective, instructions are incomplete (Garfinkel 1967, 29). This thesis looks specifically at the use of a YouTube video tutorial that instructs the user in how to make croissants by hand. Using auto-ethnographic methods, the methods that I, the user, use to navigate through the tutorial are examined. These methods are then further examined in order to illustrate how video instruction compares to other studied media of instruction.

1.5 Conclusion

In all, ethnomethodology and public issues anthropology are complementary fields, as they both seek to illuminate the practical situations that members of society find themselves in. Borofsky’s (2019) call for anthropologists to be more conscious of the effects their work has on real people can only be aided by ethnomethodology. These effects can be observed, not in theory, but in practice, in the way individuals, together, make sense of their world. By examining video instruction, as is the goal of this thesis, the practical ways members of society navigate this task can be brought forth and contribute to a more rounded understanding of video instruction.

1.6 Venue for Publication

I intend on submitting this thesis for publication in the *Journal of Pragmatics*. The Journal of Pragmatics is a monthly peer-reviewed journal which focuses on all forms of pragmatic research, along with how pragmatics relates to other fields such as conversation analysis and ethnomethodology, among others. The focus on language’s use in context, with context being a key component of ethnomethodological research, along with interdisciplinary and multi-modal research publications, this journal appears to align with the goals of my thesis.

Chapter 2

Video Instruction in Practice: An Ethnomethodological Analysis and Its Implications

2.1 Introduction

Ethnomethodological studies of video tutorials are a relatively new area of research, with few publications (Heinemann and Möller 2016), though new publications are likely forthcoming. The lack of publications is likely due to the relatively recent popularization of the use of online video tutorials for learning purposes. The advent of YouTube is particularly important to the popularization of these types of videos, as the videos on this platform are free to access and have a wide possibility of topics. Considering that ethnomethodology of instruction is an established field of study (Garfinkel 1967, 2002; Lynch 1985, 2002; Livingston 2008; Hindmarsh et al. 2011; Macbeth 2011; Ekström and Lindwall 2014; Hoeppe 2014; Lindwall et al. 2015), the addition of research on video instruction is important in order to keep the field representative of modern society. In order to explore video instruction in depth, the field of ethnomethodology must, first, be foregrounded.

2.2 Background and Theoretical Framework

2.2.1 Ethnomethodology

Ethnomethodology was first developed by Harold Garfinkel in the 1960s. Garfinkel was the first to make explicit the methods that members of society were using to make sense of social interactions. He characterized these methods in his book *Studies in Ethnomethodology* (1967), by using concepts such as accountability, which means members in a setting are making their actions “observable-and-reportable”, in order for others to *account* for what they are doing (1). The field as a whole, however, has its roots in phenomenology, the study of the constitution of

experience. Garfinkel was directly influenced by phenomenology through his connections with Alfred Schütz and Aron Gurwitsch, who were colleagues of Edmund Husserl, the founder of phenomenology (Garfinkel and Rawls 2002, 15). Specifically, the phenomenological focus on individual experience informs the ethnomethodological approach of describing methods individuals use to make themselves understood by other members of society (Francis and Hester 2007, 20). Philosopher and phenomenologist Ludwig Wittgenstein (1953) also inspired ethnomethodologists with his book *Philosophical Investigations*, in which he considers what it means to understand and how understanding often needs external, or social, validation. Garfinkel, however, focused on the empirical evidence that could be found to explain such perceptions of social life. Considering the social and interactional focus of the ethnomethodological approach, specific instances of interaction, such as various forms of instruction, can also be examined using this approach.

2.2.2 Ethnomethodology of Instruction

Within ethnomethodology, the use of instructions is one of the social tasks that has been studied for how members make sense of them. Garfinkel (1967) examined instructional tasks by using case studies in *Studies in Ethnomethodology*. An important concept, among many, that comes from this book is “ad hocing” instructions, which is the idea that all instructions must be interpreted to some degree, as all instructions are inherently incomplete (Garfinkel 1967, 21). In one of these case studies, Garfinkel presents how employees in a medical office categorize patient files based on a set of coding instructions. The “ad hoc” nature of the coding instructions is due to the disconnect that often arises between the instructions and the specific details of the materials in front of you. In the case of the coders, it is the disconnect between the reality of a

file type and the instructions for how to categorize said file that requires “ad hocing” (Garfinkel 1967, 21). With these notions in mind, the different forms that instructions come in also dictate how they are navigated by users.

As previously stated, instructions at their core are made to guide users to perform a task. It is this guidedness of instructions that makes them fundamentally social. The form that instructions come in, however, can make their sociality harder to see. Oskar Lindwall, Gustav Lymer and Christian Greiffenhagen (2015) examine different formats of instruction in the chapter “The Sequential Analysis of Instruction” of the book *The Handbook of Classroom Discourse and Interaction*. Here, Lindwall et al. (2015) look at textual and various types of in-person instructions for how members navigate them. In-person instructions have an obvious social element, in that they are, at minimum, two co-present members of society interacting. In particular, Lindwall et al. (2015) note that instructors giving instructions in-person are able to provide “correctives” to their students, which are oriented to the specific trouble the student is facing (148). These correctives are not available in written forms of instruction, due to lack of co-presence. Written instructions, however, still possess a social interactional quality, due to the fact that they are meant to be followed, or enacted, rather than just read as any other text (Lindwall et al. 2015, 146, Garfinkel 2002, 200). Video instruction, though not mentioned by Lindwall et al. (2015) in the same capacity that it is used in this project, seems to fall somewhere between written and in-person instruction. It is static in the same way written instructions are, due to the fact that real-time correctives cannot be delivered in the same way as in-person forms. This is not to say written instructions are entirely void of corrective opportunities. Lucy Suchman’s (2007) work on photocopier user manuals demonstrates an intermediate instance

where users of written instruction receive immediate feedback, only it is from a machine, not a person. Different from written instruction, however, video instruction can include dynamic demonstrations and visuals that are more akin to in-person instructional forms, more so than static words and pictures can. Video instruction also provides the user an opportunity to manipulate the video by pausing, and rewinding, which provides an opportunity to reinspect parts of the video. Video instruction has been examined in this way by Trine Heinemann and Regna Möller (2016) in the article “The Virtual Accomplishment of Knitting: How Novice Knitters Follow Instruction When Using a Video Tutorial”. This article finds that users end up trying to recreate aspects of both in-person and textual instructional forms when using a video tutorial to learn how to knit (46). Students use the video tutorial to diagnose their problems, similar to the way a student would seek a diagnosis from a co-present instructor, but this is done through rewinding and replaying the video (46). In contrast, students also frequently pause the video, leaving a static image on the screen, in order to work with their physical materials, which Heinemann and Möller (2016) liken to Lindwall et al.’s (2015) textual instruction example. With this information in mind, the subject of this thesis, which is the use of a video tutorial to make croissants, will be analyzed for where it fits within these types of instructions and what social interactions or tasks may be unique to this instance. First, however, the methodological process for collecting this data will be discussed next.

2.3 Methodology

The methodological approach I used in my study was mainly auto-ethnographic and ethnomethodological. In order to strengthen the use of auto-ethnography as an academically acceptable method, I created a multi-step research framework to also incorporate elements of

traditional ethnography and participant-observation. The ethnomethodological approach was then used to create a detailed account of my auto-ethnographic experience, with an emphasis on how I achieved my goal of making croissants by using a video tutorial in methodical ways. Further information regarding the audio-visual recording methods used in this project can be found in Appendix 1. As well, a more detailed explanation can be found in Appendix 2 regarding the choice of YouTube video tutorial. The title of the video chosen, however is “How to Make Proper Croissants Completely by Hand”, which was made and presented by Joshua Weissman (2018).

2.3.1 Research Framework and Auto-ethnography

First, my multi-step research framework consisted of different levels of information that I would provide to myself while filming the tutorial process. In total, I designed a series of six unique steps that I would follow for different portions of the tutorial process. These steps included combinations of various levels of talking and self-reflection, as I wanted to capture a wide array of scenarios between total participant and total observer status. In practice, however, I used only three of the steps due to time considerations, both in filming and in analysis. The three steps I used are as follows: (1) Following a portion of the tutorial straight through with no written reflection or talking, (2) Following a portion of the tutorial with talking and reflection at the conclusion of the section, (3) Following a portion of the tutorial with talking and written reflection continuously throughout. The reason for step (1) is the expectation that this would be the most natural way for me to follow a video tutorial if I was not being filmed. This step was put in place to remove myself as a researcher from the process as much as possible. The constraints of this step are that only my physical actions, body language and facial expressions

are available to analyse, which proves more difficult when using an ethnomethodological approach. The justification for step (2) was to introduce talking in order to increase the amount of witnessable information that was available to analyse. The written reflection at the end of this step is also meant to mimic the participant observation notes that an ethnographer might take at the end of an observation session. The limitations of this step are that by forcing myself to talk, when I would not otherwise, I am taking myself out of solely the participant role and into the observer and researcher role, which is a limitation of auto-ethnography. The justification for step (3) of the process was to gather written reflection as the actions were happening during the tutorial process, in hopes of gathering more accurate and relevant information regarding my experiences. Similar to step (2), the limitations of this step are that each time I stop to reflect on the process, I am taking myself out of the participant role and into the researcher role. In all, these steps are meant to mitigate the fact that auto-ethnography asks the researcher to be both the participant and the observer at the same time. In the case of an ethnomethodological account of a social situation, it has been argued that non-academic individuals are also acting as both participant and analyst, with the end goal of simply making sense of a given situation. (Francis and Hester 2007, 14)

Further considering the use of auto-ethnography as an anthropological method, there are a number of criticisms that this method faces, which I would argue are mitigated when using this method in an ethnomethodological context. Looking to educational psychology researcher, Mariza Mendez's (2014) article, "Autoethnography as a Research Method: Advantages, Limitations and Criticisms", she suggests the following issues with auto-ethnography: (1) Ethical considerations associated with auto-ethnography (282), (2) Self-indulgent and fictitious

narratives (283), and (3) Individualized accounts (283). First, the ethical consideration that Mendez is referring to is the question of gaining consent from those the auto-ethnographer wishes to include in their personal narrative, and whether this is necessary or not (282). In the instance of my project, this was not an issue, as I was the only participant involved in the production collection of data, barring a brief conversation with one other person regarding the success of the croissants (see Appendix 7), thus I could provide continuous consent. Auto-ethnographic accounts that do involve other participants other than the researcher would undoubtedly have to deal with this question, which suggests that all anthropological situations may not be well suited to auto-ethnographic methods. Moving to the second criticism, which is the issue that auto-ethnographic accounts have the potential to be self-indulgent or fictitious, it can be argued that the ethnomethodological approach employed in this project works to combat this issue. As the goal of an ethnomethodological account is to make the data collected inspectable by others, I was afforded the benefit of having all my data collected on video. Thus, any self-indulgence or fictitiousness of my auto-ethnographic account has the potential to be compared to the inspectable data that accompanies this work. The ability for readers of this work to view the video data, however, is both ethically and logistically constrained, which is a limitation of this project. As well, the amount of information available for observation in a video recording has its limitations, which will be discussed subsequently. Lastly, the criticism that auto-ethnography creates accounts that are too individualized is precisely one of the goals of ethnomethodology. Ethnomethodology is looking to make accounts of specific instances of social interaction, knowing that situations are going to vary, but that members will always, somehow, make sense of these situations. Further, it is also suggested that the sheer fact that the

auto-ethnographer exists within the social world they are examining means that she has been acted on and acts upon the world around her (Ellis and Bochner 1996, 24). This means that an auto-ethnographic account will surely have some relevance to the world it is commenting on, despite its individualized nature. In all, auto-ethnography and ethnomethodology work well as co-methods of research. Beyond ethnomethodology, however, the criticisms laid out by Mendez (2014) may very well become more relevant.

2.3.2 Transcription Method

In order to capture multiple levels of data that occurred in the recordings of myself following the video tutorial, I devised a dynamic transcription method. Upon inspection of various multi-modal transcription methods (Jefferson 2004; Suchman 2007; Goodwin 2013), it became obvious that a new transcription system would have to be devised, though inspiration was undoubtedly drawn from these previously mentioned methods. Particularly, Jefferson's (2004) and Goodwin's (2013) schemes, while multi-modal, focused on conversation between at least two participants. In the case of this project, however, conversation is not truly present. I am talking, and the presenter is talking, but we are not talking to each other. The temporal correlation between my talk and actions and the presenter's talk and actions was also an element that is not easily captured using the aforementioned schemes.

To record my actions and talk, along with the presenter's actions and talk, I created the following transcription scheme. This scheme is particularly influenced by Lucy Suchman's (2007) scheme presented in *Human-Machine Reconfigurations: Plans and Situated Actions*, which uses this grid structure and deals with synchronizing the actions of two different actors.

An excerpt from the scheme I produced is as follows:

Time	0:03:42	0:03:43	0:03:44	0:03:45	0:03:46	0:03:47	0:03:48	
My Actions					Glances at video	Plays video		
My Talk	Noice, okay. Oh wow, it's 11 inches. Okay. ----->							
Joshua's Actions						Has tape measurer next to dough while talking and looking at phone?		
Joshua's Talk						You can see me looking at the notes c		

Figure 1. Excerpt of multi-modal transcription scheme created for this project

This format shows how my and the presenter’s actions and talk correspond with one another, along with the definite time scale of the footage collected. The actions and talk are described to one second of accuracy. Blank cells after the description of an action indicate that said action takes place until otherwise noted by the description of a new action. The transcription of the talk is made to spatially line up with its start and stop in relation to an action. This is done, either with the use of an arrow (---->), to indicate how long these words were said over, or the text is made smaller if the talk is particularly long and goes past the visual completion of the action it corresponds with. The full transcription scheme can be viewed in Appendix 3.

2.4 Analysis

2.4.1 Introduction

The video footage captured for this project consists of the entire process of me following the video tutorial in order to make croissants. The video footage also captures my initial attempt

at making the croissant dough, which failed early on due to an issue with the wax paper that was being used. In total I recorded approximately 220 minutes of footage. With this in mind, a few key scenes will be discussed in depth, but a sequential list of steps can be found in Appendix 4. As well, a number of general observations regarding the data collected can be found in Appendix 5.

2.4.2 Tasks of Measurement

Tasks of measurement appear frequently in the data collected during this project. To explore the methods used to complete measurement tasks present in the data, three examples will be described in detail, which include: (1) Measuring length versus width of the dough, (2) Cutting the dough into triangles, and (3) Checking the resistance of the dough during the rolling process.

2.4.2.1 Length Versus Width

This measurement task takes place at step 10 in the aforementioned sequence of events. At this point the dough has been resting for an hour and is now ready to be rolled out into a larger rectangle and eventually cut into triangles. As seen in the “Rolling Dough Scene” (RDS) (See Appendix 3), I begin by previewing approximately 45 seconds of the video tutorial, where the presenter describes how to roll the dough out into a larger rectangle. Specifically, he states “So you're going to roll it until it's about 10 inches wide, not long but 10 inches wide and a quarter of an inch thick.” During this scene, the presenter shows the dough in the process of being rolled out to the above dimensions but then the scene cuts to the dough fully rolled out.

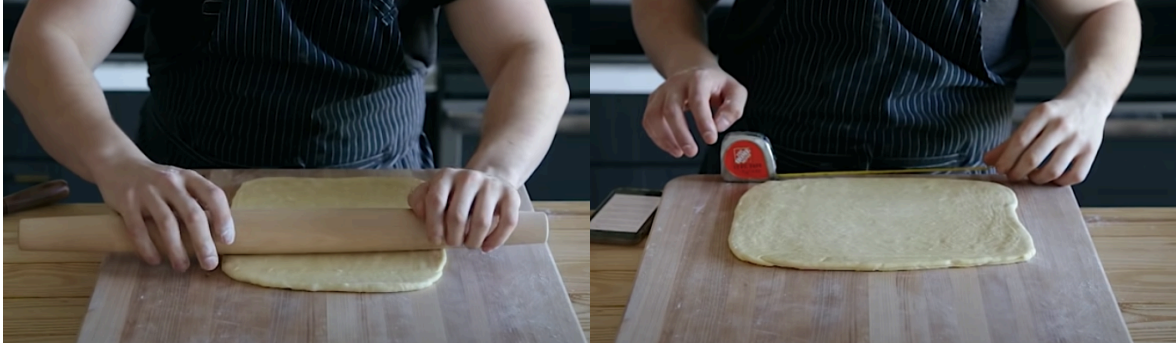


Figure 2. Dough rolling demonstration cut short

Thus, the full rolling process is not shown in the video. To these specific measurement instructions, I first write down in my reflection notes “How can you have length w/o width and vice versa”. Subsequently, after having paused the video, I retrieve the dough from the refrigerator and begin to prepare my work surface for rolling. During these actions I make three statements, out loud, in short succession: “How can you specify 10 inches wide, but it doesn't matter how long?”, “How can you have width without length? Or length without width?”, “It makes no sense”. After these statements, I begin rolling the dough with no further measurement queries at this point. I resume the video for approximately one minute at this point, allowing the tutorial to go on past my current step of rolling out the dough. During this time I am rolling the dough out in both directions fairly evenly, rotating the dough 90 degrees every so often, though the dough does begin to elongate in one direction more than the other. After this rolling session I measure the dough with a ruler for the first time. At this point it can be seen that I have chosen the slightly longer axis of the dough to be the “width” axis. This is confirmed by my concurrent statement of “Okay so I want it to be wide ... about 10 inches wide and we're at about 6 and a

quarter of an inch thick”. It should be noted here, that despite my mention of thickness, I do not measure the thickness of the dough at this point.



Figure 3. Measuring the dough along the longer axis, deeming it “width”

From this point, I continue to roll the dough along this axis, but come to the realization that the dough is too resistant and needs to rest in the refrigerator. Thus, this measurement task carries over to the “Dough Cutting Scene” (DCS) (See Appendix 3). In DCS I resume rolling the dough along the established “width” axis. I note that the dough is 8.5 inches long, taking the measurement with a ruler along the same axis as before, not measuring the perpendicular axis whatsoever at this point. Shortly after this ruler measurement, I consider the thickness of the dough, but only verbally. I state, “And a quarter inch thick. Never sure exactly what a quarter inch...looks like. But we shall measure it”. At this point, however, I do not measure the thickness of the dough with a ruler, or otherwise, as I simply continue rolling out the dough along the “width” axis. I then take a ruler measurement along the “width” axis, and find that the width has increased to 11 inches. This is one inch beyond the required dimension of 10 inches, but I do not appear to find this to be an issue. I remark that I am surprised that it is 11 inches long, but I move

on quickly and begin rolling the dough in the perpendicular direction, along the default “length” axis. After this brief rolling session I measure the thickness of the dough for the first time, using the ruler. I find that the dough is half an inch thick in the spot where I measure it. With this information, I state, “Okay. Half an inch thick. So, if it's ten inches this way, that's good. Then I need to roll it this way”, and I proceed to roll the dough along the “length” axis. During this, however, I state “His looks way bigger”, referencing the paused video screen where the presenter’s dough can be seen. In response to this, I use the ruler to measure the “width” axis again, and find that it is exactly 10 inches (down from the previously mentioned 11 inches, though I do not react to this change in measurement). I, then, continue to roll the dough along the “length” axis briefly. From here, I take the thickness measurement of the dough with the ruler in two places, finding that one measures $\frac{1}{4}$ inch thick, while the other measures less than half an inch. I, then, try to roll the dough out slightly in both directions to get the thickness to be more uniform, but when I take the measurements again, I find that some places are $\frac{1}{4}$ inch thick, while others are still less than $\frac{1}{2}$ inch thick. I note this down in a reflection note, and I proceed to move on to the next set of instructions, cutting the dough. This length and width measurement task is called into question in the subsequent example, despite my determination that I have satisfied the dough dimensions to the point where I can proceed to the next step.

2.4.2.2 Cutting the Dough

This measurement task takes place directly after the previously described step, and coincides with step 11 in Appendix 4. This measurement task involves marking the top and bottom of the dough rectangle at specific intervals, and then connecting these marks by cutting

across the dough, ultimately forming 5 or 6 isosceles dough triangles. This data comes from the “Dough Cutting Scene” (DCS) (See Appendix 3).

I begin this process by watching the video tutorial for approximately 30 seconds, during which the presenter describes how to make these marks along the edges of the dough. He states, “And you're gonna make little marks along the bottom of the dough, at four and half inch intervals. Then, from there, looking at the marks at the bottom, you're basically going to mark the top as well by following in between two marks on the bottom of the dough...” I rewind the video once during this 30 seconds, to relisten to these instructions again. After this, I pause the video, and ask out loud, “Four and a half inch intervals? What the heck? How do you get...hmmm”. I then briefly hold the ruler next to the dough, and use my hands to straighten out the edge of the dough closest to me. After this, I rewind the video tutorial yet again to hear the interval cutting instructions again, and this time I lean in closely to the computer screen to inspect what the presenter is showing during these instructions. I pull away from the computer screen and use my hand to approximate how many intervals will fit along the edge of my dough.

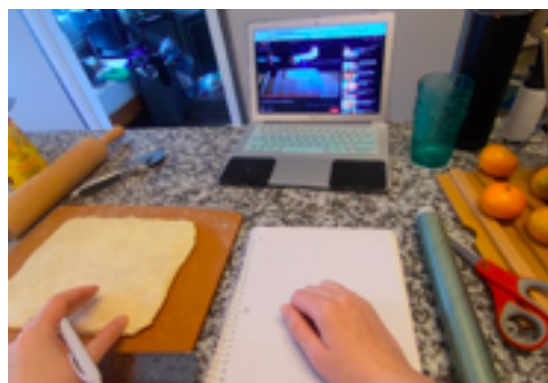


Figure 4. Left hand approximating how many intervals will fit within the dough

After this, I navigate through the video again, and pause on the section where both the top and bottom marks of the dough can be seen. I write a reflection note at this point, stating “how does

he get so many marks in 10", Confused!!" This leads me to use the ruler to measure the "width" axis of the dough again, but I do not comment on what I find with this measurement. Instead, I proceed to roll the dough out further in both directions. I then place the ruler along the "width" axis of the dough, and pick up the pizza cutter I intend to use to cut the dough, but I do not start cutting. Rather, I rewind the video to the initial interval measurement instructions section, and lean in to inspect the video carefully. I, then, pull away, asking "Did I..." and I place the ruler along the "length" axis of the dough. I do not comment on this measurement action directly, but I proceed to write a reflection note stating "got width and length confused", to which I also repeat out loud. Further, I state, "I am so confused. Which side is 10 inches?". This confusion circles back to the previous measurement task, where the dough needed to be rolled to specific measurements before proceeding. Though I thought I had done a sufficient job completing the rolling step, I am now questioning whether this is so or not. I proceed from this confusion by rolling the dough out slightly more in each direction, and then play the section of the video that discusses the length and width measurement instructions again, while adjusting the dough with my hands. I rotate the dough back and forth a few times while glancing at the video, comparing how my dough appears to that of the presenter. After this, I briefly use the ruler to measure the "length" axis of the dough, but no comment is provided on the results of this measurement, and I simply continue rolling the dough out in both directions. Shortly after this, I place the ruler along the bottom edge of the dough, in the "width" axis direction and I begin to make cuts in the dough. While making these cuts I state, "Okay, this makes no sense." and "Okay, we'll just do that, and that, and ... that?". I make three cuts along the bottom of the dough, at what appears to

be one inch from the left, then one inch from the right, and then I examine the ruler to determine the middle point between these two cuts, and place a cut at the measured middle point.



Figure 5. Cuts made in dough

After making these three cuts, I examine the paused video screen again, and I state, “Although, that doesn't really make sense. But I've cut it already. Okay. Let's see if we can squish these back together. Probably not.” I briefly try to squish the centre cut in the dough back together again, but this does not work. I move on from this issue by deciding that I am just going to cut the triangles out by approximating what the presenter's finished cuts look like, and I begin cutting. Upon the completion of these cuts, I state, “Okay, that's good enough” and I move on to finish the tutorial.



Figure 6. Cutting the dough so it is “good enough”

2.4.2.3 Checking Resistance of the Dough

This last example takes place between the aforementioned rolling and cutting steps, but coincides with step 10 in Appendix 4. The type of measurement that concerns this example is different from the other two, as it does not involve numeric measurement. Rather, it concerns a measurement task that must be carried out by the body. This task will be described subsequently.

This measurement task begins in “Rolling Dough Scene” (RDS), specifically when the presenter of the video tutorial indicates that the dough can become too resistant to roll out, and thus will need to be rested for at least 30 minutes. This information is provided at the beginning of “Rolling Dough Scene” (RDS), but it is not until I have begun rolling out the dough to try to meet the width and length requirements that the resistance of the dough is called into question. After rolling out the dough for some time during RDS, I end up changing the technique I use to hold the rolling pin. I move my hands from the handles of the rolling pin, to both hands on the centre of the rolling pin.



Figure 7. Change in hand placement on rolling pin

This is the first physical indication that the dough is beginning to become resistant, as I perceive that the dough needs more force to be rolled out. I continue with this altered hand placement for approximately 90 seconds. After this I return to a regular hand placement for rolling, but my movements appear slower and there is still more force behind my movements than usual. Shortly after this, I touch the dough with my fingers and state, “Hmmm...I feel like it needs more time to rest perhaps”. In response to this, I turn the dough over and see if the dough is any less resistant on the other side. From here, I continue to try to roll the dough out for approximately 30 more seconds, but I then concede, “Yeah, it's not really rolling out.” Due to this, I return the dough to the fridge for 30 minutes.

This measurement task carries into the “Dough Cutting Scene” (DCS). After 30 minutes, I retrieve the dough from the fridge. Before beginning to roll the dough out, I squish the dough with my finger and state, “The dough is definitely more squishy, and I think the gluten has relaxed. But we shall see”. I begin to roll the dough out with normal hand placement and after about 30 seconds I state that the dough is still somewhat resistant, and I note this in a reflection note as well. At this point the resistance of the dough is not referenced in talk or writing again, but one further action indicates that the dough may still be resistant. This action takes place approximately 30 seconds after my reflection note, and I am trying to roll out the dough to meet

the width parameter of the other measurement task. Instead of rolling the dough out with two hands on the rolling pin, I place one hand on the dough while the other hand rolls the rolling pin.



Figure 8. Further hand placement change while rolling dough

The resistance of the dough no longer appears to be a concern for me, as I am able to meet the measurement parameter of 10 inches wide set out in the other task. Thus, I move on with the rest of the tutorial.

2.4.3 Forms of Measurement

With these scenes in mind, two distinct methods of measurement emerge. These are numerical and non-numerical, or, embodied. These methods will be discussed below, but further background information regarding ethnomethodological studies of measurement can be found in Appendix 6.

Numerical forms of measurement are fairly easy to see in the previous three scenes. For example, any time I use the ruler to measure the dimensions of the dough, I am performing a numerical measurement task. What is more, is that these numerical forms of measurement are more easily made explicit, due to the standardization of them. Other actions, such as estimation are also numerically based, as despite the lack of precision, these actions are still taking place in

reference to numbers (Greiffenhagen and Sharrock 2008). Tasks of estimation end up being the methods of measurement I use at two different moments in the process of shaping and cutting the croissant dough. First, in trying to understand how the presenter fit four notches at four and a half inch intervals along the edge of the dough, I use my hand to estimate how many intervals would fit. The numerical reference here is obvious, in that I know approximately how wide four and a half inches is, and I know how long my dough is, which is 10 inches. This example, however, reveals an instance where estimation is not enough for me to proceed with, as I end up measuring and notching these intervals with the use of a ruler, albeit still with some level of confusion. The other moment is when I have to cut the dough into triangles. Instead of making reference notches on both edges of the dough, as the presenter instructed me to do so, I decide to cut the dough so it approximately looks like the presenter's finished product. This turn to estimation is due to my lack of understanding in the numeric measurement instructions provided by the presenter, but my actions are still done in relation to these numbers. I know that I need to get five or six even triangles out of the dough, and that the base of the triangles should be about four and a half inches wide. An element of "embodied inquiries" (Lynch, Livingston and Garfinkel 1983; Lindwall et al. 2015) can be seen in this task, as I engage my sense of sight to answer the question of how the dough should look once it is cut and how this compares to the reality of my materials. As well, in order to proceed with the instructions, I am determining what is adequate for myself in the context of my materials and my knowledge of baking, which is similar to Harvey Sacks's (1989) discussion of personal definitions of normal. My definition of adequacy, or what is "good enough" would not be suitable for every user of this tutorial, as it would change based on their materials and knowledge of baking. There are, however, privileged

accounts of what is normal (Sacks 1989, 303). In the case of following the croissant video tutorial, the presenter's sense of what is normal is privileged due to his membership as a presenter (Francis and Hester 2007) and a seemingly skilled baker. As a user of this video, my understanding of normal must be compared against the presenter's sense of normal, due to my membership as a user of the tutorial. As an intermediate baker, however, my understanding of the tutorial, while less privileged than the presenter, may be more privileged than a novice baker's understanding. As well, despite what the presenter of the video posits as normal, or not normal, within the course of this tutorial, I have to make judgements about what is normal, as I experience the reality of the procedures laid out in the tutorial. These aforementioned estimation methods also speak to Garfinkel's (1967) discussion of the need to "ad hoc" instructions, as I find that the reality of my materials does not coincide with those of the presenter, and I must therefore "ad hoc" the instructions to be able to proceed.

An example of embodied measurement in these aforementioned scenes is the point in the process where I need to check the resistance of the dough. In practice, my body begins reacting to the increased resistance in my dough, which is seen in my change in hand placement on the rolling pin (see figure 6). I eventually determine that the dough is too resistant when I state that "Yeah, it's not really rolling out.", indicating that I have also visually confirmed the dough's resistance. This example differs from the strictly numerical and estimative methods of measurement in two key ways. First, this method relies completely on "embodied inquiry" as I must qualitatively assess the dough with both my hands and my eyes. There is no other way to determine the resistance of the dough than in the practice of rolling out the dough and physically engaging with it. This also speaks to availability of these embodied measurement actions to the

viewer of the video, as physical engagement with the materials is the only way for the viewer to confirm their understanding of what is shown on the screen. Second, this instance of measurement is not met with much trouble, unlike the other instances of measurement outlined previously. One way to understand this lack of trouble could be that in this case my materials resembled the presenter's materials sufficiently that there was little to no confusion, whereas in the case of rolling out and cutting the dough, my materials did not coincide as closely with the presenter's, which created confusion.

In all, these instances and classifications of measurement methods can be seen as one of the ways I, the user of the video tutorial, made sense of the information provided, in order to, ultimately, produce successful croissants. The criteria for success and how others perceived the finished croissants can be found in Appendix 7. These examples of measurement tasks also illustrate that the act of measuring takes place frequently throughout the process of following this video tutorial, and goes beyond the typical numerical examples. This is a significant finding, as it has the potential to influence the way other instances of video instruction are viewed, knowing that measurement is also done with the bodily senses. This bodily conception of measurement also has the potential to influence the way video instruction is created in the future, as more attention is paid to how embodied forms of measurement are conveyed in this medium.

2.5 Discussion

With these methods of measurement in mind, the broader question of how users deal with trouble and proceed through video instruction can be discussed. In particular, this instance of video instruction can be compared against other ethnomethodological examinations of instruction that take place in different media, such as written or in-person forms.

First, video instruction can be examined based on the reviewability of the medium itself. All forms of textual instruction, from Garfinkel's (1967) workplace file coding rules to Lindwall et al.'s (2015) textual crocheting instructions, have the advantage of being infinitely reviewed by the learner. Video instructions, since they are self-contained in the same way textual instructions are, can also be infinitely reviewed by the learner. In the case of the croissant video tutorial, I review measurement instructions multiple times while trying to proceed through the video tutorial, in hopes of clarifying the confusion I was experiencing. As described in the analysis of these measurement tasks, the ability to review the instructions was still not enough to clear up the confusion I was experiencing, but the ability to attempt to use the video in this way still stands. Looking at ethnomethodological writings that specifically reference this type of video navigation, Heinemann and Möller (2016) examine how the users in their study pause and rewind the knitting video tutorial, and conclude that users are reviewing the video to diagnose the problems they are encountering with their materials. Conversely, in-person forms of instructions do not have this advantage. The repeatability of information is limited to the discretion of the instructor, along with other limiting factors such as time and class size. It should be noted that this disadvantage would apply only to purely demonstrative forms of in-person instruction that are not accompanied by textual forms. Looking at a different example, Suchman's (2007) work on human-machine interaction acts as an intermediary example regarding the reviewability of instructions. Due to the fact that the instructions for how to use the photocopier and the accompanying actions both take place on the photocopier's interface, it is harder, but not impossible to review instructions. In order to review a previous instructional sequence, the user must start the entire photocopying procedure over again because the machine

cannot simply go back one step, as the interface forces the user to start over from the beginning (151). This is different from textual, video and in-person, because while technically the photocopier's instructions can be reviewed infinitely, the instructions are intertwined with the actions of the user and the materials being manipulated. This way of proceeding through instructions, where either you move on to the next step, or you begin all over again, speaks more to the type of materials and actions the user is doing, rather than the instructions themselves. Physically not being able to reverse one's materials without completely beginning again is present in many of the actions that took place in the instance of video instruction examined herein. Certain actions, such as mixing ingredients together are physically irreversible, and should something go wrong, these steps would have to be done again with a new set of materials. The first attempt at this recipe failed due to an instance of irreversibility of materials, when wax paper became embedded in the croissant dough and could not be removed. In contrast, studies of instruction where materials are reversible, such as crocheting or knitting (Lindwall et al. 2015; Heinemann and Möller 2016), have the potential to change the way instructions are navigated through, as in a sense, what is at stake when a mistake is made is lower in these instances, due to the reversibility of the materials.

Similarly, the availability of visual demonstrations in instruction can be examined. In textual instructions, that include only words, visual demonstrations of the instructions in action are non-existent. This may seem like an obvious disadvantage, but plenty of instructions are written this way and succeed at functioning as instructions. In Lindwall et al. (2015), the authors use the term "textual instructions" to describe written instructions with accompanying pictures. This is an interesting way to describe this type of instructions, because it is not strictly textual.

The pictures provided in these types of instructions, however, are static and can only show individual moments of the instructions in actions. In comparison, in-person, and video instruction, to a certain extent, have the opportunity to not only show the key moments in instruction but to also show the connecting actions between key moments. In the case of the video tutorial examined herein, though the opportunity was there to show a complete demonstration of the instructions, the video was edited to shorten certain sequences of actions. For example, when I am trying to discern how to roll out the dough to the specified dimensions, the presenter shows the first few rolling actions in this process, but cuts to the dough being completely rolled out shortly after this. The demonstration of measuring the dough at four and a half inch intervals is also obscured by the camera angle, another disadvantage that video instruction holds. In-person instruction, while varying widely in the way it is carried out, at least has the potential to combat some of these issues by allowing learners to fully examine a demonstration from different angles. Taking these similarities and limitations into consideration, the visual demonstrations available in video instruction have the potential to be most similar to in-person demonstrations, but in reality are often shorten due to editing and camera angle limitations.

Beyond technical shortcomings of what is available in video tutorials, there is also the issue of the availability of embodied actions as part of instruction. Regardless of verbal or visual explanations of embodied actions, the user of a set of instructions must engage with the material reality before them in order to fully comprehend the embodiment of these actions. In this way, all forms of instruction are limited in what they can convey about embodied action, but video instruction has some characteristics that may provide an advantage in this regard. Specifically,

the ability to rewind and review the video has the potential to allow the user to match as closely as possible what is shown on the screen to the reality of their materials. It is important to note, however, that no matter how close the user finds their materials to those shown on the screen, the meaning of the instructions will only truly be found in the physical engagement with their materials. So, in this way, video instructions, over other forms of instruction, has the potential to aid the user in understanding these embodied actions through reviewability, but no form of instruction can replace the need for embodied engagement with the materials in these situations.

Finally, in considering the use of auto-ethnography within this project, a few comments can be made on its success and applicability. Ultimately, the auto-ethnographic data collected was successfully analyzed from an ethnomethodological perspective, meaning that it is comparable to other methods of data collection used in ethnomethodology. Given this, however, based on the use of the research framework outlined previously, the fact emerges that there needs to be some level of self-awareness as to what will be accessible in the data for ethnomethodological analysis. If I had, for example, only captured instances of instruction where I was not talking or reflecting in writing, I would have ended up with data that was not accessible for ethnomethodological analysis due to the lack of witnessability. This self-awareness during the data capture, though, takes the auto-ethnographer out of the solely participant role, and edges into the observer role, which some may see as problematic in terms of the quality of data captured. Despite these aforementioned factors, I completed the video tutorial successfully, which in itself makes the data captured viable as a topic for ethnomethodological analysis.

In all, video instruction has attributes of both textual and in-person instructional forms, but is better classified as an intermediate form between these two types. The reviewability of a

video tutorial is most akin to the use of textual instructions, because the user is in control of how the instructions will be used, whereas it is up to the instructor in in-person forms. As well, the visual information that a video tutorial can provide would immediately seem most similar to in-person forms, but due to editing and viewing angle limitations, the continuity of visual information provided can suffer. As well, it is important to consider the use of auto-ethnography within this project, and that while a level of self-awareness is required to ensure ethnomethodologically useful data is collected, the goal of following this video tutorial to completion was met, regardless of the data collection methods, which in and of itself, can be considered a success.

2.6 Conclusion

Drawing on the detailed description and analysis of the data presented herein, the methods used to navigate through this instance of video instruction have been brought to light. From an ethnomethodological perspective, myself, the user, relied upon measurement methods that can be divided into two categories, numerical and embodied. Numerical measurement methods are methods done with reference to numbers, whether explicitly, as with a ruler, or not, as with methods of estimation. Embodied methods of measurement are methods that rely on the bodily senses to gather information, and are often done in reference to personal conceptions of qualitative descriptions, as in the case of determining the resistance of the dough. Recognizing that measurement methods extend beyond strictly numerical types has the potential to influence the way video instruction is studied, and, possibly, created. With these methods in mind, this instance of video instruction has been compared to other forms of instruction, such as textual or in-person media, and examined for what this can say about video instruction more broadly. The

use of auto-ethnographic methods within this project has also demonstrated that there are strengths, weaknesses, and ethical considerations to using this approach within an ethnomethodological context, but can ultimately be a viable data collection method. With this being said, video instruction is an important topic for not only ethnomethodological analysis, but for social science research as a whole, particularly as these modes of instruction become more necessary not only in light of the COVID-19 pandemic, but as remote forms of education become more common place. These factors make video instruction a topic of enduring academic interest.

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Appendix 1

Methodology: Audio Visual Set-Up

In order to capture the actions that I carried out during the tutorial process in as much detail as possible, three different camera placements were used. First, in order to capture what I was seeing during the tutorial process, a GoPro camera was attached to my body. The placement of this camera on my body required several trials in order to capture what my eyes were seeing most accurately. Initially, I assumed that placing the camera as close to my eyes as possible would result in the most accurate portrayal of what I was seeing. With this, I tried placing the camera in the centre of my forehead, using a head mounting device. When I played the practice footage back, however, the camera captured much of what was *above* my field of view and cut off a significant portion *below* my natural field of view. From this, I realized that the camera needed to be placed lower on my body to capture what my hands would be doing during the tutorial process. Upon further research, I learned that the human field of view is approximately 50 degrees above and 70 degrees below the eye line. A camera, however, has an equal field of view above and below the lens. Thus, I realized that the camera would need to be placed below my eyes in order to centre it in my field of view. With further experimentation, the most accurate place on my body to place the camera seemed to be right in line with my mouth. This, though, was not a practical placement for my experiment, as I would have to talk during the filming process. As a result, I ended up placing the camera as high up on my chest as possible, using a chest mount, in order to get as close to the ideal placement as possible, while still being practical for research purposes.

Along with the body camera, a stationary camera was used to capture my actions from a wider field of view, and, more importantly, to capture my facial expressions and body language, which were not captured by the body camera. This camera was placed approximately 2.5 metres away from me while I was following the tutorial and would run simultaneously with the body camera.

Lastly, the screen of my computer was recorded while I was following the tutorial process, in order to capture how I manipulated the video itself. The screen recording also captured any additional computer resources that I needed to use during the process, such as using a search engine to look up cooking terms or seeking alternative instructions. This recording also ran simultaneously to the two other cameras.

Appendix 2

Choosing the Video Tutorial

It is important to note the method used to choose the particular video tutorial used in this project, as there were many to choose from. When considering the video tutorial topic broadly, it was important to choose a topic that would be challenging and somewhat unfamiliar to the user in order to illuminate areas of difficulty in using video tutorials. Thus, as the user of the video, myself, I chose a topic that I had never tried to accomplish before, which ended up being a tutorial on how to make croissants. It is important to note that I would consider myself an intermediate baker, and this level of knowledge is reflected in the way I end up using the video tutorial, as discussed in the analysis below.

Moving to the selection of a specific croissant tutorial, I had to find a video that met a few constraints. First, the video had to be in English in order for me to comprehend it fully. Second, I needed to find a tutorial that matched the set of kitchen tools I had available to me at the time. This ended up meaning that I searched for tutorials that indicated that the process was done “by hand”, as many recipes included the use of a kitchen mixer, which I did not have access to. Of the videos that met these constraints, I chose the video titled “How to Make Proper Croissants Completely by Hand”, which was made and presented by Joshua Weissman (2018). Joshua is a YouTube creator who regularly creates videos on how to cook and bake a variety of dishes by hand. I chose this croissant tutorial particularly because it was the video of this kind with the most views (5.6 million as of October 19, 2020), and I wanted to inspect a video that many members of the public had used, or at least viewed, before.

Appendix 3

[Multi Modal Transcription Spreadsheet](#)

This links to the multi-modal transcription of the scenes “Dough Cutting Scene” (DCS) and “Rolling Dough Scene” (RDS)

Appendix 4

Recipe Sequence

The sequence of steps I followed is as follows:

1. Measure out ingredients (water, yeast, flour, sugar, salt, butter, egg yolk),
2. Mix ingredients together and knead until smooth,
3. Let dough rest for 10 and 25 minute intervals, kneading slightly at the end of each interval,
4. Shape the dough into a 7 x 7 inch square and wrap in wax paper,
5. Let the dough rest for 12 hours.
6. Create a 4 x 4 inch square of butter in wax paper
7. Place the butter square onto the dough square and fold the edges of the dough over to cover the butter
8. Roll the dough out to 18 inches long, fold into thirds and let rest for 1 hour
9. Repeat previous step once
10. Roll the dough out to 10 inches wide and $\frac{1}{4}$ inch thick. Dough too resistant at this stage, so it is rested for an additional 30 minutes
11. Once dough is rolled out, mark the dough at 4.5 inch intervals and cut along these marks to make 5 or 6 triangles of dough.
12. Roll the triangles of dough from the wider end up to the sharp end.
13. Apply an egg wash to the tops of the croissants
14. Let the croissants rest in a cool oven for 2 hours until they have doubled in size.
15. Bake the croissants at 415 degrees Fahrenheit for 15 minutes.

Appendix 5

General Video Tutorial Use Observations

First, throughout this entire process, when the tutorial is being played, there appears to be a significant difference in the amount of time I spend watching the screen versus only listening to what is being said. The amount of time listening to the tutorial significantly outweighs the amount of viewing time. This can be seen in the multi-modal transcription of two key moments during this process (see Appendix 1). Specifically, in the scene titled “Dough Cutting Scene”, the amount of time I spend actually looking at the computer screen is only 30.1% of the time that the video is being played during this scene. This presumably means that I am either listening to the tutorial, or simply letting it play while doing other tasks, the other 69.9% of the time. This scene also represents the higher end of video watching percentage, as this scene is where I encounter a significant amount of trouble in following the instructions. Within this scene, it can be seen that I listen to the instructions first, and when they do not make sense to me, I then go in and inspect the video screen more closely for clarification. In scenes leading up to this point, I encounter far fewer issues, which corresponds to a decrease in actual viewing of the video tutorial. Many of the early steps in this tutorial were familiar to me, such as weighing out ingredients and mixing them together. Thus, just hearing the description of these steps, with occasional visual confirmation, was sufficient to proceed. This speaks to the fact that a lot of my understanding of baking is encoded in language, as I am able to link words to actions. This link between words and actions, however, would likely vary based on skill level, as words, such as “kneading the dough”, may not be readily linked to an action in the mind of a novice baker. With this general

observation in mind, a closer examination of a few key moments will further illuminate how I use the video tutorial to instruct myself in the croissant making process.

Appendix 6

Ethnomethodological Studies of Measurement

Measurement tasks, though often associated with numbers, are not confined to numerical reference (Sacks 1989; Greiffenhagen and Sharrock 2008). Within ethnomethodology, the term “embodied inquiries” (Lynch, Livingston and Garfinkel 1983; Lindwall et al. 2015), has been used to describe modes of inquiry that involve the bodily senses, such as touch, taste and sound. As well, ethnomethodologist, Eric Livingston (1987), takes a more physical and embodied approach to the methods used by members, in *Making Sense of Ethnomethodology*. Livingston explores examples of non-verbal situations that members still make sense of in everyday life. These include queueing in a line, crossing the street and freeway traffic, all of which are made sense of without the verbal communication between members. Outside of ethnomethodology, David Sutton (2001), a food anthropologist, discusses a similar idea in his book *Remembrance of Repasts: An Anthropology of Food and Memory*. Here, he discusses that much of the learning that takes place in cooking happens outside of the recipe itself, and is found in the “embodied apprenticeship” of cooking (135). Similarly, Lindwall et al. (2015) suggests that certain aspects of instruction require “embodied inquiries” to learn them, such as how tightly to hold the yarn in a crocheting tutorial, and that there is no other way to learn such things than with the body (147). “Embodied inquiries” can be considered a form of non-numeric, embodied measurement, but the definition of measurement must first be broadened. Measurement in its most basic form is interpreting information in reference to a given metric. This is most obviously seen in numeric forms of measurement, where height can be measured in reference to centimetres and weight in

reference to kilograms. Measurement can also be seen, however, in matters of social life, such as comparing an event against an individual's conception of "normal" (Sacks 1989, 296).

Specifically, Harvey Sacks (1989) discusses the use of the term "normal" in the course of conversation. Sacks (1989) suggests that the *definition* of "normal" may be relative to each person who uses it, but the *use* of the word has a definite understanding in conversation (296).

Put differently, everyone knows what is normal for themselves in a given context, and when normal is used in conversation, it is understood that normal, or not normal, is said in reference to the speaker's personal sense of normal, not some universal sense of the word. With this in mind, conceptions of "normal" and the use of "embodied inquiries" are different from weight and length metrics, because they are personally referenced forms of measurement, but are still forms of measurement, as they are being used to interpret information against a metric. With this in mind, both numerical and embodied forms of measurement can be found in the three scenes outlined above.

Appendix 7

Gauging Success of the Croissants

In order to determine the success of the product I created using this video tutorial, I used three methods. First, I compared my finished product to the completed croissants shown in the video. This is also one of the methods I used to gauge the success of individual steps throughout the process. The following is a picture of the croissants shown in the video compared to the croissants I made.



Figure 9. Joshua's Croissants vs. My Croissants

This comparison method could only help identify the visual success of the croissants, which is only a portion of what constitutes a successful croissant. The second method, which was used to gauge the look and taste of the croissants, constituted buying a few croissants from the grocery store in order to compare a widely available version of a croissant to the ones that I created.



Figure 10. Store-bought croissants (top) vs. My handmade croissants (bottom)

This comparison is useful in the sense that it helps confirm whether I made a croissant in the general sense of what a croissant is. This method of comparison, however, might not be applicable to other sets of instructions that success rest on the absolute replication of all components of task. The last method used to gauge the success of the croissants was asking another person to taste and judge the croissants. As I only had access to one other person at the time, I asked them to taste the croissants. This introduces some bias into this method, but I tried to convey that an honest assessment was most valuable to my project. Their assessment is as follows:

A: So in terms of like, classic croissant, I feel like this one (referring to the store bought version), looks more classically croissant, just due to the browning on it.

M: What about the shape?

A: As well, there's also a certain symmetry to this one (referring to the store bought croissant), but this one (referring to the handmade ones) is much more, kind of, poofed up, and you know a croissant has like, layers, so it's tall. So in like different ways...

M: And what about the smell? Smell that one (store bought)

A: That smells like bread.

M: Okay, now smell this one (homemade)

A: This smells like a croissant.

M: Okay, I guess we should taste them. Which one should we try first?

A: Let's try the bad one (store-bought) first.

(...)

A: But even if wasn't as stale, it's kind of like...

(...)

M: Okay, let's pull of the end and see what it looks like inside (handmade croissant)

A: Smells really good

M: They smell kind of yeasty.

A: A little bit...

M: Wow. Yeah, they taste like croissants

A: That's really good. Like right in the centre, they're like a little bit under, but, but they taste delicious. I kinda even like the extra yeasty flavour. Look at the layers, it really worked.

As can be seen from this transcript, the handmade croissants were visually different than the store-bought version, but had a superior taste. A few issues with this instance of comparison include the fact that we did not compare the handmade croissants to the picture of the croissants in the video tutorial, along with the bias introduced in terms of personal preference for certain attributes of the croissants.

Appendix 8

Availability of Correctives

Correctives, or in-person modifications to instruction that are based on the specific challenges a student is facing, are certainly not present in this instance of video instruction. There is no way for the creator of the video to see how I am following the instructions in my own kitchen, and modify them accordingly. Specifically, in regard to the measurement tasks, I ask questions such as. “How can you have length without width?”, but these questions can be answered by no one but myself during the process of making the croissants, particularly because these issues of measurement are very context specific. This also holds true for video instruction more broadly, as video tutorials are generally self-contained instances of instruction. So, in this way, video instruction is more similar to textual forms of instruction, as the information provided by both a video and a set of textual instructions cannot be altered. It would be remiss to say, though, that a YouTube video, which is the type of video used in this instance, exists in isolation. It is still true that the YouTube video itself cannot change, just as written instructions cannot, but the online setting of the YouTube video adds a level of interaction that is not available in offline forms of instruction. Early on in the process of making croissants, I discover that I have a different type of yeast than the video instructs, and so I use a search engine to determine how and if my ingredient can be substituted.

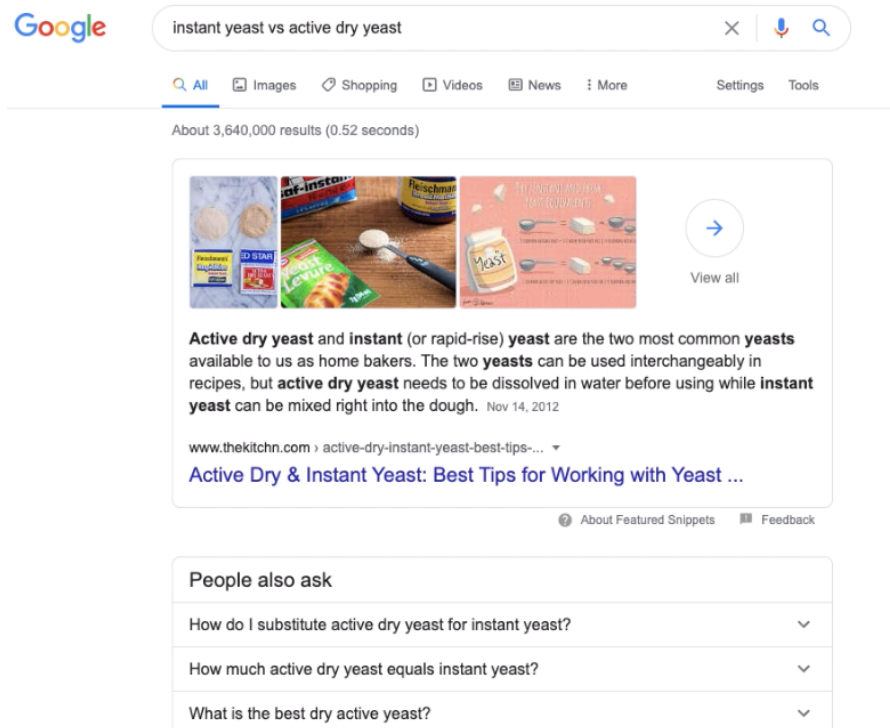


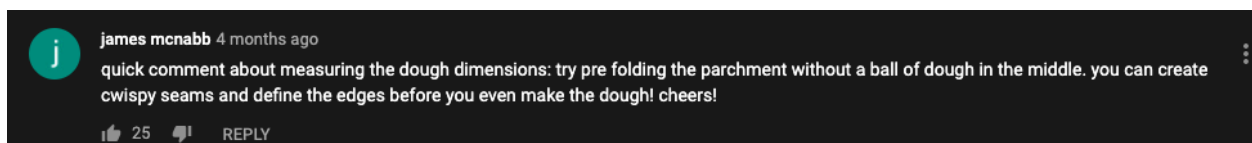
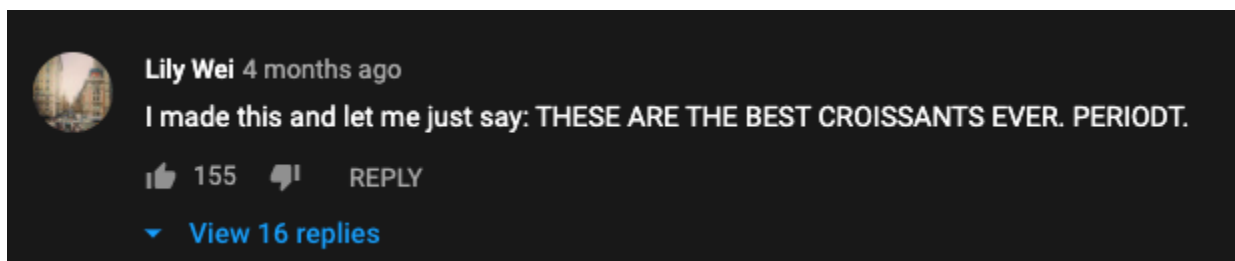
Figure 11. Screen Capture of Search Engine Use


In this way, I am seeking a corrective for my specific situation, only it is not an in-person human corrective. It is important to note here that only certain types of situations lend themselves well to using external resources to seek corrective information. In the case of an ingredient substitution, I am able to generalize the problem sufficiently to find a general answer that I can then apply to my situation. In the case of wondering why my specific video tutorial did not specify the length dimension of the dough, the answer to this is unlikely to be found on the internet. With this being said, using internet resources is not confined to instances of video instruction, and can in fact be used in any case of instruction.

An aspect that is, arguably, unique to online forms of instruction, and YouTube tutorials particularly, is the ability for user to provide comments on the video. Specifically, the comments section of the video is where other viewers can provide their thoughts and opinions on the tutorial, and, sometimes, provide further information than the video alone provides. I did access

the comments section a few times during the tutorial process, but I do not recall finding information that significantly impacted the way I was following the instructions. This is a potential area for further research. Despite the fact that I did not significantly reference the comments section, this is not to say that useful information cannot be found here. Upon a secondary look at the comments sections of this video tutorial, it can be seen that many users are just commenting on the overall difficulty of the tutorial itself, which in itself may be helpful to a user seeking a tutorial with a specific level of difficulty. Other users, though, indicate that they have successfully completed the recipe and provide their own recommendations or modifications for how to proceed with the recipe. At the time of writing, there are no comments from the presenter of the video, but there is always potential for this to change. I, as the user, also have the ability to ask a question regarding the video itself or my experience in following the tutorial, but unlike in-person instruction, there is no social obligation to answer my question in the comments section. With this, the comments section has the potential to provide further information, if not specifically “correctives”, to users.


User Comments Examples




 **Bona Fide** 2 months ago
So I used this video to make croissants and thought these few additional tips may come in handy

1. If you're using all purpose flour instead of bread dough, the dough may turn out quite sticky so don't hesitate to add flour. It rescued my dish
2. Parchment paper or cling wrap can be an alternate for the wax paper
3. The butter may ooze while rolling the dough but there's no harm caused so don't worry
4. I would suggest folding the dough four times instead of two to get a more flaky texture

I made mine and it turned out wonderfully. Bon appetite :)
[Show less](#)

 **Chubby Weeb** 6 months ago
Even in quarantine, I don't have enough time for this lol

 1.9K  [REPLY](#)

[View 21 replies](#)

Figure 12. Screen captures of user comments on Joshua Weissman's (2018) video tutorial