GRC 506: Content Analysis

STUDY GUIDE

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Please Note: Some chapters of the textbook may not be included in the Study Guide. The content of the excluded chapters is not within the scope of the course objectives. Learners are encouraged to read all textbook chapters as supplementary reading.

COURSE OVERVIEW

GRC 506: Content Analysis

Course Description

This course utilizes a seminar format introducing the techniques of Krippendorff's content analysis and reporting style found in many content analysis aware journals. Demonstrations of competency require the production of seminar quality presentations shared with fellow classmates. Students completing this course should demonstrate a broad understanding of content analysis; in outline. Further, students should be able to evaluate published papers and understand content analysis as a means to systematically research large volumes of text and produce publishable reports of findings.

Course Learning Objectives

The objectives of this course are to:

CLO 1.   Creation of seminar quality presentations analyzing published content analyses for form, style, categories, units, coding strategies, statistical analyses, validity, reliability, and reporting techniques.

CLO 2.   Creation of seminar quality presentations analyzing nonacademic media and interviews using text and content analysis tools.

CLO 3.   Produce a seminar quality presentation demonstrating the use of R and R studio while using the InterRater Reliability (IRR) module.

CLO 4.   Produce a seminar quality presentation demonstrating the ability to use CDC's EZ-Text or Yoshikoder.

Useful Resources

This class recommends the following resources:

Resource	URL
Self-Guided PowerPoint Tutorials	http://www.gcflearnfree.org/powerpoint2010
Handy Tips for Using PowerPoint	http://youtu.be/3QwC1cl0Wa4
EZ-Text and User Manual	http://www.cdc-eztext.com/
Yoshikoder	http://www.yoshikoder.org/
R and R Studio	http://cran.rstudio.com/ http://www.rstudio.com/products/rstudio/download/

UNIT ONE

This unit covers the following textbook chapters:

Chapter One	
History	pages 10 to 23
Chapter Two	
Conceptual Framework	pages 24 to 48
Chapter Three	
Uses and Inferences	pages 49 to 50

Chapter One

This chapter focuses upon the ability to:

- Articulate the historical need to understand communications using systematic approaches across a wide variety of disciplines, groups, and media.
- Differentiate different modes of communicating content involving verbal, written, and visual materials.
- Differentiate *content* from *communications*.
- Define a few basic goals of content analysis in terms of their value to social scientists and business professionals.

This chapter discusses several stages in the history of content analysis: quantitative studies of the press; propaganda analysis during World War II; social scientific uses of the technique in studies of political symbols, historical documents, anthropological data, and psychotherapeutic exchanges; computer text analysis and the new media; and qualitative challenges to content analysis.

Chapter Two

This chapter focuses upon the ability to:

- Define the terms *content analysis, reliability, technique,* and *validity.*
- List and explain *the six features* of texts relevant to content analysis.
- List and explain the conceptual framework covered in *section 2.4* of the textbook.
- Become accustomed the idea that content analysis is an unobtrusive technique minimizing the influence of researchers upon sources of information.

This chapter introduces an epistemologically grounded definition of content analysis that guides the remainder of the book. It discusses its relationship to other definitions, other methods of social inquiry, and where and how it deviates from them. A conceptual framework is developed in terms of which the purposes and processes of content analysis may be understood. It includes the researcher, the knowledge he or she needs to bring to it, and the criteria by which a content analysis can be justified, and it makes transparent the function of various methods to be discussed in subsequent chapters. This

chapter concludes with the suggestion that the ongoing changes in information technology make content analysis an increasingly attractive method for understanding social phenomena.

Chapter Three

This chapter focuses upon the ability to:

- List and describe the *six categories* (e.g. *extrapolations, standards, indices and symptoms, linguistic re-presentations, conversations,* and *institutional processes*) of content analysis.
- Argue which kinds of inquiry may facilitate a successful content analysis.

This chapter reviews the breadth of applications of content analysis, not in terms of subject matter or the disciplines that engage the technique but in terms of the kinds of inferences that enable content analysts to accomplish their tasks. Several types of logic capable of relating data to their contexts are distinguished here: systems, standards, indices, representations, conversations, and institutions. These outline frameworks for theories that content analysts may draw upon or need to develop.

Reflection Activity

Integrate your responses to the following reflections questions into your reading notes:

Reflection Question 1.	Which activities are contained within a content analysis?
Reflection Question 2.	How did sociologists apply early content analysis and why would it matter to a marketer or organizational leader?
Reflection Question 3.	Why is content *not inherent* to communications? How does this pose problems to an organizational leader?
Reflection Question 4.	What is the primary motivation for using content analysis?
Reflection Question 5.	What does it mean to say *content analysis is a systematic interpretation of text*?
Reflection Question 6.	Complete the sentence: Content analysis is a research technique for _____.
Reflection Question 7.	As a technique, what is the goal of content analysis?
Reflection Question 8.	How does validity differ from reliability?
Reflection Question 9.	Why do texts lack a single meaning?
Reflection Question 10.	Can I sketch Figure 2.1 and explain it to a layperson so they understand why I am in this class?
Reflection Question 11.	What are the types of *extrapolation* and how do they differ?
Reflection Question 12.	What are the types of *standards* and how do they differ?
Reflection Question 13.	How does *re-representing* a situation differ from describing a situation?
Reflection Question 14.	Why is it difficult to use conversations as part of a content analysis?
Reflection Question 15.	What are *institutional processes* and why would a researcher care about their influence upon communications?

Week One Discussion Question

The purpose of the discussion question is to allow you as the student/learner to demonstrate your understanding of the chapter's key learning points and how you might apply them in given situation. Participating in the discussion question forum provides you as the student/learners an opportunity to compare your ideas to ideas from others in your class.

Instruction: Using the chapter's key learning points, provide your answer to the questions below.

> **Select a sample paper from the Content Analysis Reader and discuss whether the use of content analysis matched the aims of the study. Support your position using at least three concepts from chapter three of the textbook.**

Unit One Assignment

Your assignment is to create a seminar-quality PowerPoint presentation examining an article of your choice from the Content Analysis Reader.

Important Due Dates and the Purpose of the Assignment

This assignment requires the following submission:

End of Week 1. Submit a 10-15 minute presentation conforming to the presentation assignment. You will post your presentation to the *Unit 1 Presentation Forum* and review/critique two other posted presentations.

Presentation Assignment

The goal is to create a 10-15 minute presentation involving one of the sample papers from the Content Analysis Reader and concepts covered in class. The presentation should focus upon whether:

- Content analysis was a suitable technique for the study.
- The approach used in the paper was systematic and handled concerns about validity and reliability.
- The study clearly defined the context of the study and the stakeholder groups benefiting from the study.
- It utilized the six categories of content analysis.

The presentation should integrate material from course readings as well as relevant information from previous readings. Although the presentation should strive to be complete and concise, it will likely not offer the *final word* on the project. In fact, content analysis, although systematic in nature, often reflects conflicting perspectives regarding a text—thus rarely does one perspective win the argument. Further, if you recall, you cannot reduce the text to a single meaning; hence, you should expect to think about conflicting meanings and perspectives.

You should consider using visual aids such as PowerPoint or other technique to present your project and its arguments. Make sure you provide the necessary evidence, figures, and materials to make your presentation completely a contained argument. If possible, conclude your presentation with one or two questions allowing other classmates to respond to your presentation.

The purpose of this assignment is to not only have you apply the concepts of the reading, but also see how an experienced content analyst uses what you learned about thus far in the class. In addition, fellow students will share critiques in insights into projects—making the assignment a shared learning experience.

UNIT TWO

This unit covers the following textbook chapters:

Chapter Four

This chapter focuses upon the ability to:

- Understand and articulate the *concept*, *components*, and utility of a *research design*.
- Grasp the concepts of *operationalizing knowledge of a context*, *unitizing*, *sampling*, *recording/coding, data reduction, inference*, and *narration*.

As a technique, content analysis relies on several specialized procedures for handling text. These can be thought of as tools for designing suitable analyses. This chapter outlines the key components of content analysis and distinguishes among several research designs, especially designs used in the preparation of content analyses and in designs for content analyses that collaborate with other research methods to contribute to larger research efforts.

Chapter Five

This chapter focuses upon the ability to:

- Differentiate *sampling units, recording/coding units*, and *context units* as to gain an appreciation of their utility.
- Differentiate the five ways to distinguish units: *physical, syntactical, categorical, propositional,* and *thematic.*

This chapter discusses the units of analysis used in content analysis: sampling units, recording units, and context units. It also addresses the purposes of unitizing and discusses five ways of defining units to increase the productivity, efficiency, and reliability of content analysis research.

Chapter Six

This chapter focuses upon the ability to:

- Define a *sampling unit* appropriate for a study.
- Differentiate and understand the utility of various *random sampling methods*.
- Discuss the concept and importance of *sample size* for a content analysis.

The universe of available texts is too large to be examined as a whole, so content analysts need to limit their research to a manageable body of texts. Although attempts to answer research questions from a limited set of data introduce the specter of sampling bias, it is possible to collect data by means of sampling plans that minimize such bias. This chapter extends the theory of sampling from populations of individuals to the sampling of texts. It discusses available sampling techniques and makes suggestions concerning how analysts can determine adequate sample sizes.

Chapter Seven

This chapter focuses upon the ability to:

- Record/code using a strategy befitting the data while understand the struggles in producing sounds coding strategies.

In making data—from recording or describing observations to transcribing or coding texts—human intelligence is required. This chapter addresses the cultural competencies that observers, interpreters, judges, or coders need to have; how training and instruction can help to channel these to satisfy the reliability requirements of an analysis; and ways in which the syntax and semantics of data languages can be implemented cognitively. It also suggests designs for creating records of texts in a medium suitable for subsequent data processing.

Reflection Activity

Integrate your responses to the following reflections questions into your reading notes:

Reflection Question 16. What is the idea of research? (See chapter 4.1.)
Reflection Question 17. What is a *datum*? What is *data*?
Reflection Question 18. What is the purpose of a *research design*?
Reflection Question 19. List and describe the components needed to transform text into results.
Reflection Question 20. Why is it important to *operationalize knowledge*?
Reflection Question 21. What is a *unit*? Give a few examples.
Reflection Question 22. List and describe the types of *units*. Give an example of each.
Reflection Question 23. List and describe the five ways to define *units*. Give an example of each.
Reflection Question 24. What is the purpose and utility of uncovering themes within a text?
Reflection Question 25. What can go wrong when a researcher improperly defines a unit?
Reflection Question 26. What are the advantages of drawing a statistical sample?
Reflection Question 27. What guides all content analyses?

Reflection Question 28.   List and describe the types of *sampling methods*. Give an example of each.

Reflection Question 29.   What are the considerations going into the determination a sample size?

Reflection Question 30.   What does a *significance level* of 0.1 mean?

Reflection Question 31.   Should research be reproducible? Why or why not?

Week Two Discussion Question

The purpose of the discussion question is to allow you as the student/learner to demonstrate your understanding of the chapter's key learning points and how you might apply them in given situation. Participating in the discussion question forum provides you as the student/learners an opportunity to compare your ideas to ideas from others in your class.

Instruction: Using the chapter's key learning points, provide your answer to the questions below.

> **Select a sample paper from Content Analysis Reader and discuss whether it utilized suitable unitizing, sampling and coding strategies. Provide an example using two codes and explain whether you think the codes were correctly determined and used. Justify your position using concepts from chapters 5, 6 and 7 from the textbook and excerpts from the sample paper.**

Unit Two Assignment

Your assignment is to create a seminar-quality PowerPoint presentation examining a news article, a political blog article, or an article of your choice.

Important Due Dates and the Purpose of the Assignment

This assignment requires the following submission:

End of Week 2. Submit a 10-15 minute presentation conforming to the presentation assignment. You will post your presentation to the *Unit 2 Presentation Forum* and review/critique two other posted presentations.

Presentation Assignment

The goal is to create a 10-15 minute presentation unitizing and coding a news article, a political blog article, or an article of your choice using concepts covered in class. The presentation should demonstrate the abilities:

- Creation, demonstration, and justification of a unitization and coding strategy fitting your selected source.
- Creation, demonstration, and justification of a code list fitting your selected source.
- An example where you code two paragraphs of text from your selected source.

If you need some ideas about coding the paragraphs, check out http://youtu.be/Dfd_U-24egg?list=PL8CB91CC62C1C2C7E for an idea involving *line-by-line coding* as a strategy to help you unitize and create a code list.

The presentation should integrate material from course readings as well as relevant information from previous readings. Although the presentation should strive to be complete and concise, it will likely not offer the *final word* on the project. In fact, content analysis, although systematic in nature, often reflects conflicting perspectives regarding a text—thus rarely does one perspective win the argument. Further, if you recall, you cannot reduce the text to a single meaning; hence, you should expect to think about conflicting meanings and perspectives.

You should consider using visual aids such as PowerPoint or other technique to present your project and its arguments. Make sure you provide the necessary evidence, figures, and materials to make your presentation completely a contained argument. If possible, conclude your presentation with one or two questions allowing other classmates to respond to your presentation.

The purpose of this assignment is to not only have you apply the concepts of the reading, but also see how an experienced content analyst uses what you learned about thus far in the class. In addition,

fellow students will share critiques in insights into projects—making the assignment a shared learning experience.

UNIT THREE

This unit covers the following textbook chapters:

Chapter Eight

This chapter focuses upon the ability to:

- Understand *data languages* in terms of *syntax*, *variable*, *value*, *constants*, *grammar*, and *logic*.
- Gain insight into the structure of communications often taken for granted.
- Differentiate *nominal variables*, *orderings*, and *metrics*.

Categories and measurements are the entry points to empirical research. We treat their particular organization as a data language, which is conceived to have a syntax and a semantics. The semantics of a data language ties data to the phenomena of the observed world, to coders' readings of texts, and the syntax of a data language links the data to the computational processes of an analysis. This chapter is concerned with the forms that satisfy the syntactical requirements of data languages for content analyses. It provides definitions of terms related to the construction of such languages, illustrates the essential features of data languages, and distinguishes variables—categories, measurement scales, and the like—according to the orderings and metrics they exhibit.

Chapter Nine

This chapter focuses upon the ability to:

- Define and appreciate the utility of an *analytical construct* as a means to producing inferences.
- Differentiate *sources of certainty* from *sources of uncertainty*.

Following the discussions in previous chapters of different uses of content analysis and the kinds of inferences they make, this chapter illustrates several ways of operationalizing analytical constructs from various ways of knowing the contexts of given texts. Analytical constructs are adopted to justify the

abductive inferences content analysts make. This chapter presents examples of the forms that such constructs might take.

Chapter Ten

This chapter focuses upon the ability to:

- Gain an appreciation for the role of statistics in analyzing texts, data, and content analyses.

Methods in content analysis largely address the making and processing of data and the application of analytical constructs that preserve some of the data's meanings, leading to valid inferences. This chapter discusses ways in which researchers can represent the results of content analyses such that they may recognize patterns and discover new ways of exploring their findings. Such representations are informative relative to often-implicit standards, several of which are reviewed in this chapter.

Optional Reading: Chapter Eleven

This chapter focuses upon the ability to:

- Understand the benefits and utility of using CATA during a content analysis.

This chapter describes how computers can aid content analysis research. Computers have been hailed as reliable, fast, and increasingly inexpensive tools for processing large volumes of textual data, and a great deal of progress is being made in the development of software that can assist content analysts in finding statistical patterns in so-called "big data." This chapter reviews the key procedures and approaches that underlie most currently available software and are likely to be the basis of future software. Although the use of computers allows content analysts to circumvent the tedium involved in manual data handling and virtually eliminates the problem of unreliable coding, computer applications are approaching other kinds of limits, and these are discussed here as well.

Reflection Activity

Integrate your responses to the following reflections questions into your reading notes:

Reflection Question 32. What does the researcher need to do after recoding/coding and applying analytical constructs?

Reflection Question 33. What is the utility of *word counts*?

Reflection Question 34. What is the purpose of performing a *cross-tabulation*?

Reflection Question 35. How do you think Figure 10.7 was created and what can you learn about robots from the figure?

Reflection Question 36. How can clustering help you detect themes in an interview? Create an example showing how you can use clusters to generate a theme.

Reflection Question 37. Summarize the approaches to defining the semantics of data. Which approach would be the most useful for interview data?

Reflection Question 38. What are some examples of verbal designations and how can they help a researcher code an interview?

Reflection Question 39.	Why would a researcher simulate an interview?
Reflection Question 40.	List and describe the components of a *data language*. Give an example of each.
Reflection Question 41.	What are *nominal variables* and where would you encounter them? Can you give an example of a nominal variable?
Reflection Question 42.	What is an *ordinal metric*? Can you give an example of an ordinal metric?
Reflection Question 43.	What is the purpose of an *analytical construct*?
Reflection Question 44.	List and describe the *sources of certainty* and *uncertainty*. Give an example of each.

Optional Reflection Activities for Chapter 11

Reflection Question 45.	How can a KWIC listing (or *concordance*) help you understand the meaning of a word?
Reflection Question 46.	CATA often provides a count of all the unique words in a document. Why does this matter to a researcher? How can word counts aid in detecting themes?
Reflection Question 47.	CATA usually allows you to code the data. How does this enhance the reliability of a study?
Reflection Question 48.	True or False: *EZ-Text* is not useful for analyzing interview data. (See the assignment for a hint.)
Reflection Question 49.	True or False: *Yoshikoder* can help you find word counts and generate concordances or KWIC lists. (See the assignment for a hint.)

Week Three Discussion Question

The purpose of the discussion question is to allow you as the student/learner to demonstrate your understanding of the chapter's key learning points and how you might apply them in given situation. Participating in the discussion question forum provides you as the student/learners an opportunity to compare your ideas to ideas from others in your class.

Instruction: Using the chapter's key learning points, provide your answer to the questions below.

How could computer software remove problems involving unreliable coding of interview data?

Unit Three Assignment

Your assignment is to create a seminar-quality PowerPoint presentation applying either EZ-Text or Yoshicoder to an interview.

Important Due Dates and the Purpose of the Assignment

This assignment requires the following submission:

End of Week 3. Submit a 10-15 minute presentation conforming to the presentation assignment. You will post your presentation to the *Unit 3 Presentation Forum* and review/critique two other posted presentations.

Presentation Assignment

The goal is to create a 10-15 minute presentation involving a transcript located at the end of this unit (see Appendix A: The Snowden Interview) and concepts covered in class. The presentation should focus upon **one** of the following options:

Option 1: EZ-Text

CDC EZ-Text is a software program developed to assist researchers create, manage, and analyze semi-structured qualitative databases. Researchers can design a series of data entry templates tailored to their questionnaire. These questionnaires are usually administered during face-to-face interviews with a sample of respondents. A response to a question may be entered into EZ-Text either as a verbatim transcript (e.g., from a tape recording), or a summary generated from the interviewer's notes. Data from respondents can be typed directly into the templates or copied from word processor documents. Following data entry, investigators can interactively create on-line codebooks, apply codes to specific response passages, develop case studies, conduct database searches to identify text passages that meet user-specified conditions, and export data in a wide array of formats for further analysis with other qualitative or statistical analysis software programs.

Choosing this option requires you to demonstrate:

- The ability to input the interview into an EZ-Text database.
- The ability to define, apply, and justify a coding scheme.
- The ability to *export the codebook* you may post alongside your presentation within the forum.

Option 2: Yoshikoder

Yoshikoder is a cross-platform multilingual content analysis program. You can load documents, construct and apply content analysis dictionaries, examine keywords-in-context (concordances), and perform basic content analyses, in any language. You can write content analysis dictionaries. Yoshikoder provides summaries of documents, either as word frequency tables or according to a content analysis dictionary. You can also apply a dictionary analysis to the results of a concordance, which provides a flexible way to study local word contexts.

You may watch a 20-minute tutorial on Yoshikoder at http://www.youtube.com/watch?v=a_5qZ786BDo

Choosing this option requires you to demonstrate:

- The ability to input the interview into Yoshikoder.
- The ability to generate a dictionary containing at least five patterns within a category.
- The ability to generate and interpret a concordance you may post alongside your presentation within the forum.
- The ability to generate and interpret a word (frequency) count you may post alongside your presentation within the forum.

Either presentation option should integrate material from course readings as well as relevant information from previous readings. Although the presentation should strive to be complete and concise, it will likely not offer the *final word* on the project. In fact, content analysis, although systematic in nature, often reflects conflicting perspectives regarding a text—thus rarely does one perspective win the argument. Further, if you recall, you cannot reduce the text to a single meaning; hence, you should expect to think about conflicting meanings and perspectives.

You should consider using visual aids such as PowerPoint or other technique to present your project and its arguments. Make sure you provide the necessary evidence, figures, and materials to make your presentation completely a contained argument. If possible, conclude your presentation with one or two questions allowing other classmates to respond to your presentation.

The purpose of this assignment is to not only have you apply the concepts of the reading, but also see how an experienced content analyst uses what you learned about thus far in the class. In addition, fellow students will share critiques in insights into projects—making the assignment a shared learning experience.

Appendix A: The Snowden Interview

This transcript contains part of a famous interview given by Edward Snowden and Glenn Greenwald. The text of the interview is available in the forum.

----- BEGIN TRANSCRIPT -----

The NSA whistleblower who revealed the PRISM program has publically revealed himself to be Edward Snowdern, a former private contactor for the NSA. He gave an interview with journalist Glenn Greenwald about his thoughts on his reasons behind whistleblowing and what what his experience in the NSA was like. The following is a transcript of the entire video interview.

Edward Snowden: "My name is Ed Snowden, I'm 29 years old. I worked for Booz Allen Hamilton as an infrastructure analyst for NSA in Hawaii.

Glenn Greenwald: "What are some of the positions that you held previously within the intelligence community?"

Snowden: "I've been a systems engineer, systems administrator, senior adviser for the Central Intelligence Agency, solutions consultant, and a telecommunications informations system officer."

Greenwald: "One of the things people are going to be most interested in, in trying to understand what, who you are and what you are thinking is there came some point in time when you crossed this line of thinking about being a whistleblower to making the choice to actually become a whistleblower. Walk people through that decision making process."

Snowden: "When you're in positions of privileged access like a systems administrator for the sort of intelligence community agencies, you're exposed to a lot more information on a broader scale then the average employee and because of that you see things that may be disturbing but over the course of a normal person's career you'd only see one or two of these instances. When you see everything you see them on a more frequent basis and you recognize that some of these things are actually abuses. And when you talk to people about them in a place like this where this is the normal state of business people tend not to take them very seriously and move on from them."

"But over time that awareness of wrongdoing sort of builds up and you feel compelled to talk about. And the more you talk about the more you're ignored. The more you're told its not a problem until eventually you realize that these things need to be determined by the public and not by somebody who was simply hired by the government."

Greenwald: "Talk a little bit about how the American surveillance state actually functions. Does it target the actions of Americans?"

Snowden: "NSA and intelligence community in general is focused on getting intelligence wherever it can by any means possible. It believes, on the grounds of sort of a self-certification, that they serve the

national interest. Originally we saw that focus very narrowly tailored as foreign intelligence gathered overseas."

"Now increasingly we see that it's happening domestically and to do that they, the NSA specifically, targets the communications of everyone. It ingests them by default. It collects them in its system and it filters them and it analyses them and it measures them and it stores them for periods of time simply because that's the easiest, most efficient, and most valuable way to achieve these ends. So while they may be intending to target someone associated with a foreign government or someone they suspect of terrorism, they're collecting you're communications to do so."

"Any analyst at any time can target anyone, any selector, anywhere. Where those communications will be picked up depends on the range of the sensor networks and the authorities that analyst is empowered with. Not all analysts have the ability to target everything. But I sitting at my desk certainly had the authorities to wiretap anyone from you or your accountant to a Federal judge to even the President if I had a personal e-mail."

Greenwald: "One of the extraordinary parts about this episode is usually whistleblowers do what they do anonymously and take steps to remain anonymous for as long as they can, which they hope often is forever. You on the other hand have decided to do the opposite, which is to declare yourself openly as the person behind these disclosures. Why did you choose to do that?"

Snowden: "I think that the public is owed an explanation of the motivations behind the people who make these disclosures that are outside of the democratic model. When you are subverting the power of government that's a fundamentally dangerous thing to democracy and if you do that in secret consistently as the government does when it wants to benefit from a secret action that it took. It'll kind of give its officials a mandate to go, 'Hey tell the press about this thing and that thing so the public is on our side.' But they rarely, if ever, do that when an abuse occurs. That falls to individual citizens but they're typically maligned. It becomes a thing of 'These people are against the country. They're against the government' but I'm not."

"I'm no different from anybody else. I don't have special skills. I'm just another guy who sits there day to day in the office, watches what's happening and goes, 'This is something that's not our place to decide, the public needs to decide whether these programs and policies are right or wrong.' And I'm willing to go on the record to defend the authenticity of them and say, 'I didn't change these, I didn't modify the story. This is the truth; this is what's happening. You should decide whether we need to be doing this.'"

Greenwald: "Have you given thought to what it is that the US government's response to your conduct is in terms of what they might say about you, how they might try to depict you, what they might try to do to you?"

Snowden: "Yeah, I could be rendered by the CIA. I could have people come after me. Or any of the third-party partners. They work closely with a number of other nations. Or they could pay off the Traids. Any of their agents or assets. We've got a CIA station just up the road and the consulate here in

Hong Kong and I'm sure they're going to be very busy for the next week. And that's a fear I'll live under for the rest of my life, however long that happens to be."

"You can't come forward against the world's most powerful intelligence agencies and be completely free from risk because they're such powerful adversaries. No one can meaningfully oppose them. If they want to get you, they'll get you in time. But at the same time you have to make a determination about what it is that's important to you. And if living unfreely but comfortably is something you're willing to accept, and I think it many of us are it's the human nature; you can get up everyday, go to work, you can collect your large paycheck for relatively little work against the public interest, and go to sleep at night after watching your shows."

"But if you realize that that's the world you helped create and it's gonna get worse with the next generation and the next generation who extend the capabilities of this sort of architecture of oppression, you realize that you might be willing to accept any risk and it doesn't matter what the outcome is so long as the public gets to make their own decisions about how that's applied."

Greenwald: "Why should people care about surveillance?"

Snowden: "Because even if you're not doing anything wrong you're being watched and recorded. And the storage capability of these systems increases every year consistently by orders of magnitude to where it's getting to the point where you don't have to have done anything wrong. You simply have to eventually fall under suspicion from somebody even by a wrong call. And then they can use this system to go back in time and scrutinize every decision you've ever made, every friend you've ever discussed something with. And attack you on that basis to sort to derive suspicion from an innocent life and paint anyone in the context of a wrongdoer."

Greenwald: "We are currently sitting in a room in Hong Kong, which is where we are because you travelled here. Talk a little bit about why it is that you came here and specifically there are going to be people…people speculate that what you really intend to do is to defect to the country that many see as the number one rival of the Untied States, which is China. And that what you are really doing is essentially seeking to aid an enemy of the United States with which you intend to seek asylum. Can you talk a little about that?"

Snowden: "Sure. So there's a couple assertions in those arguments that are sort of embedded in the questioning of the choice of Hong Kong. The first is that China is an enemy of the United States. It's not. I mean there are conflicts between the United States government and the Chinese PRC government but the peoples inherently we don't care. We trade with each other freely, we're not at war, we're not in armed conflict, and we're not trying to be. We're the largest trading partners out there for each other."

"Additionally, Hong Kong has a strong tradition of free speech. People think 'Oh China, Great Firewall.' Mainland China does have significant restrictions on free speech but the people of Hong Kong have a long tradition of protesting in the streets, of making there views known. The internet is not filtered here more so then any other western government and I believe that the Hong Kong government is actually independent in relation to a lot of other leading western governments."

Greenwald: "If your motive had been to harm the United States and help its enemies or if your motive had been personal material gain were there things you could have done with these documents to advance those goals that you didn't end up doing?"

Snowden: "Oh absolutely. Anyone in the positions of access with the technical capabilities that I had could suck out secrets, pass them on the open market to Russia; they always have an open door as we do. I had access to the full rosters of everyone working at the NSA, the entire intelligence community, and undercover assets all over the world. The locations of every station, we have what their missions are and so forth."

"If I had just wanted to harm the US? You could shut down the surveillance system in an afternoon. But that's not my intention. I think for anyone making that argument they need to think, if they were in my position and you live a privileged life, you're living in Hawaii, in paradise, and making a ton of money, 'What would it take you to leave everything behind?'"

"The greatest fear that I have regarding the outcome for America of these disclosures is that nothing will change. People will see in the media all of these disclosures. They'll know the lengths that the government is going to grant themselves powers unilaterally to create greater control over American society and global society. But they won't be willing to take the risks necessary to stand up and fight to change things to force their representatives to actually take a stand in their interests."

"And the months ahead, the years ahead it's only going to get worse until eventually there will be a time where policies will change because the only thing that restricts the activities of the surveillance state are policy. Even our agreements with other sovereign governments, we consider that to be a stipulation of policy rather then a stipulation of law. And because of that a new leader will be elected, they'll find the switch, say that 'Because of the crisis, because of the dangers we face in the world, some new and unpredicted threat, we need more authority, we need more power.' And there will be nothing the people can do at that point to oppose it. And it will be turnkey tyranny."

<div align="center">----- END TRANSCRIPT -----</div>

UNIT FOUR

This unit covers the following textbook chapters:

Special Note for Unit 4

You will be asked to install R and R Studio as to complete the presentation assignment. R, an opensource and powerful statistics package, is able to compute nearly any statistic you may encounter during graduate studies. R Studio provides a user-friendly interface to R.

Chapter Twelve

This chapter focuses upon the ability to:

- Differentiate *validity* from *reliability* using Figure 12.1.
- Define and explain the *types of reliability* appearing in Table 12.1.
- Articulate conditions enhancing measurements of reliability; in outline.

> **Important Note: Do not spent too much time in the mathematics of chapter 12—aim to understand the <u>meaning and interpretation</u> of α. We will use R Studio to calculate α. <u>Focus only upon pages 267-279, and 324-328.</u>**

This chapter begins by discussing the purpose of reliability in scientific research. It distinguishes among three designs for generating data to measure reliability, which leads to three kinds of reliability: stability, replicability, and accuracy. All of them are functions of the agreement achieved among observers, coders, judges, or measuring instruments.

Chapter Thirteen

This chapter focuses upon the ability to:

- Differentiate the various types of validity in content analysis and understand how they enhance a study.

> **Important Note: Do not spent too much time in the mathematics of chapter 13—aim to understand the <u>meaning and interpretation</u> of the types of validity. Do not spend much time on formulas since we use computers to perform the complex calculations for reliability and validity.**

Validation provides compelling reasons for taking the results of scientific research seriously. It can serve as the ground for developing theories and the basis of successful interventions. This chapter develops a typology of validation efforts that content analysts may utilize in justifying their research. It also shows ways in which analysts can quantitatively assess at least some of these efforts.

Reflection Activity

Integrate your responses to the following reflections questions into your reading notes:

Reflection Question 50.   What helps to enhance the reliability of a study?

Reflection Question 51.   What is the *interpretation* of α? What are the threshold values of α?

Reflection Question 52.   Explain the difference between *validity* and *reliability*.

Reflection Question 53.   What is *validity*? Why would a researcher care about validity?

Reflection Question 54.   What are the *types of validity*? How do they differ and how to do they lend to the validity and quality of a study? (Figure 13.1 may help.)

Reflection Question 55.   What is the basic idea of *semantic validity* and why does it matter?

Reflection Question 56.   What is the basic idea of *structural validity* and why does it matter?

Reflection Question 57.   What is the basic idea of *face validity* and why does it matter?

Reflection Question 58.   What is the basic idea of *convergent and discriminant validity* and why do they matter?

Reflection Question 59.   Why are content analysis motivated predictions desirable? What are their uses? Moreover, why do they matter?

Week Four Discussion Question

The purpose of the discussion question is to allow you as the student/learner to demonstrate your understanding of the chapter's key learning points and how you might apply them in given situation. Participating in the discussion question forum provides you as the student/learners an opportunity to compare your ideas to ideas from others in your class.

Instruction: Using the chapter's key learning points, provide your answer to the questions below.

> **Explain the differences between validity and reliability. Select a paper from Content Analysis Reader and argue whether authors were successful in illustrating the validity and reliability of their study. Justify your argument using examples from the paper and concepts from the class.**

Unit Four Assignment

Your assignment is to create a seminar-quality PowerPoint presentation demonstrating your ability to install and use R, an open source and powerful statistics package.

Important Due Dates and the Purpose of the Assignment

This assignment requires the following submission:

> **End of Week 4.** Submit a 10-15 minute presentation conforming to the presentation assignment. You will post your presentation to the *Unit 4 Presentation Forum* and review/critique two other posted presentations.

Presentation Assignment

The goal is to create a tutorial teaching fellow classmates how to calculate *Krippendorff's alpha* (α) and *percent agreement* (*%A*) between three or five coders. Perform the following steps to obtain the materials you need for your presentation.

Step 1: Installing R

Visit http://cran.rstudio.com/ and grab the latest version of R for your platform. The download site has the following links:


```
Download and Install R

Precompiled binary distributions of the base system and contributed packages, Windows and Mac users most likely want one of these versions of R:

    • Download R for Linux
    • Download R for (Mac) OS X
    • Download R for Windows

R is part of many Linux distributions, you should check with your Linux package management system in addition to the link above.
```

Windows XP/7/8/ Platforms should install the *base* package. OS/X Platforms should install only either the *Mavricks* or *Snowleopard* package.

Step 2: Installing R Studio

Visit http://www.rstudio.com/products/rstudio/download/ and install the latest version of R Studio for your platform.

Step 3: Installing and Loading the IRR Package

Start R Studio and you should find yourself at something similar to the following screenshot:
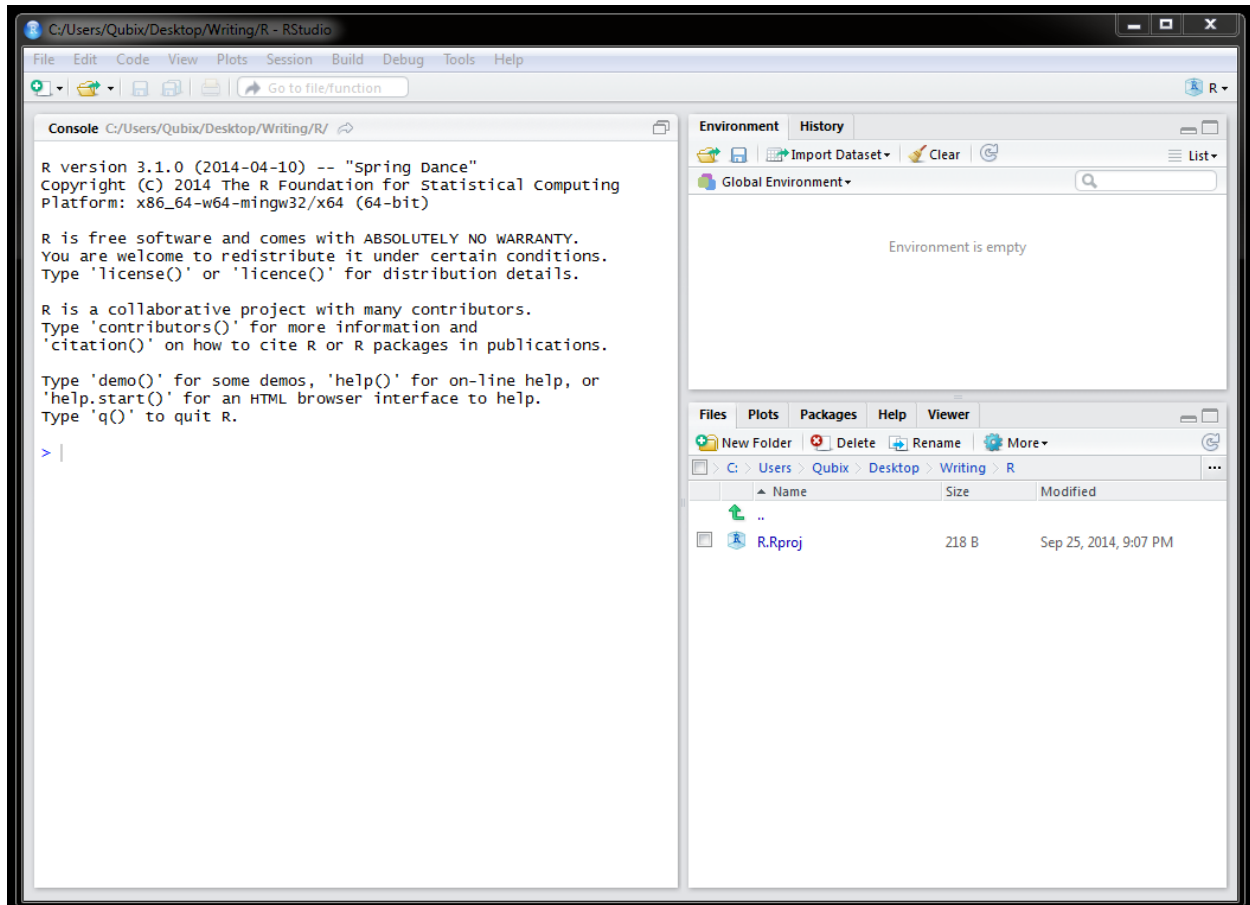
The left panel is where you enter commands into R as to carry out calculations. The window on the upper right shows the data and variables inputted into R. The bottom right panel serves multiple purposes and has an integrated help panel. You may click the *help* tab as to get online help.

R does not come equipped with the commands to compute Krippendorff's α and other handy reliability statistics. Thus, you have to install the *IRR* (*InterRater Reliability*) package as to enable R to calculate α and other handy reliability statistics. You only have to install the IRR package once—once installed, it can be used at any time!

Installing the IRR package requires you issue the following command into the left panel:

```
install.packages("irr")
```

and press <ENTER>. After a few moments, you should see R installing the package and display something like:

```
Content type 'application/zip' length 95302 bytes (93 Kb)
opened URL
downloaded 93 Kb

package 'irr' successfully unpacked and MD5 sums checked

The downloaded binary packages are in
 C:\Users\Qubix\AppData\Local\Temp\Rtmpk3P6J0\downloaded_packages
> |
```

You should get a notice that IRR was successfully unpacked. Remember, you only have to install IRR once!

You must load IRR into R as to use IRR's capabilities. You can do this by issuing the following command:

```
library("irr")
```

and press <ENTER>. (Note: You have to load IRR every time you quit R Studio.) After a few moments, you should see R load the IRR package and display something like:

(Continues upon the next page.)

```
Console C:/Users/Qubix/Desktop/Writing/R/

R version 3.1.0 (2014-04-10) -- "Spring Dance"
Copyright (C) 2014 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

> library("irr")
Loading required package: lpSolve
Warning messages:
1: package 'irr' was built under R version 3.1.1
2: package 'lpSolve' was built under R version 3.1.1
>
```

Step 4: Inputting the Coded Data

Now it is time to load the data from the three raters. The *ThreeRaterData* data file may be downloaded from the forum as a *comma separated variable* (CSV) file created within Excel. (Be sure to download it now because you will need it!) The file contains three columns, one for each rater, containing nominal data resulting from their coding activities. The dataset was generated when three raters visited 20 hotels and coded (using a supplied codebook) the quality of rooms using <u>categories</u>. The categories are:

6—Outstanding room having all the luxuries I could imagine.	**3** – Acceptable room and was lacking a few things I needed.
5—Excellent room having nearly everything I wanted.	**2**—I did not like the room and was barely acceptable.
4—Good room containing all the necessities.	**1**—Room was unacceptable.

Note: A *categorical variable* (sometimes called a *nominal variable*) is one that has two or more categories lacking an obvious ordering or ranking.
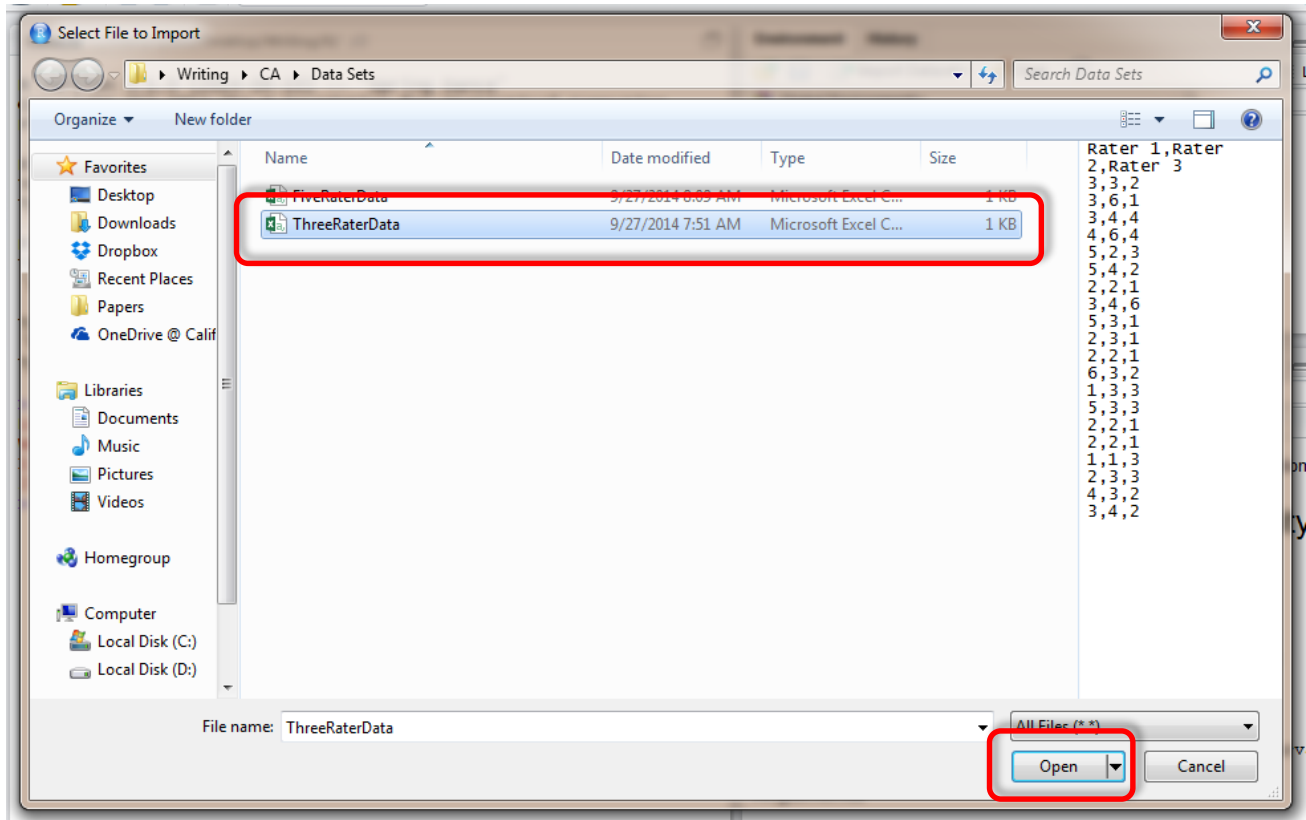
We can import *ThreeRaterData* from the CSV into R Studio using the *Import Dataset* button in the upper right corner of R Studio:
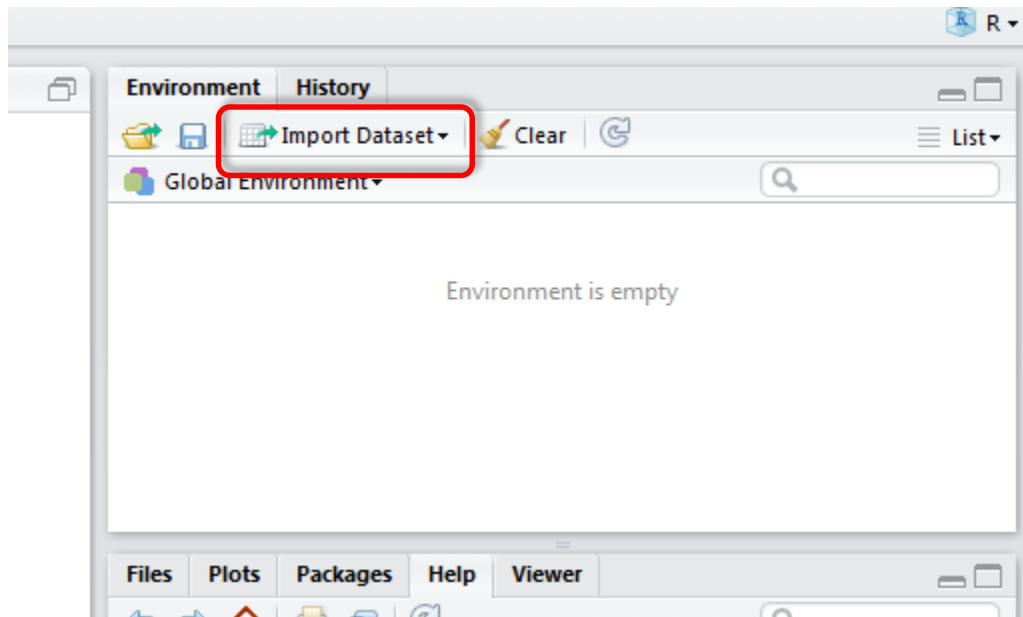
Click the *Import Dataset* button and choose *From Text File…*
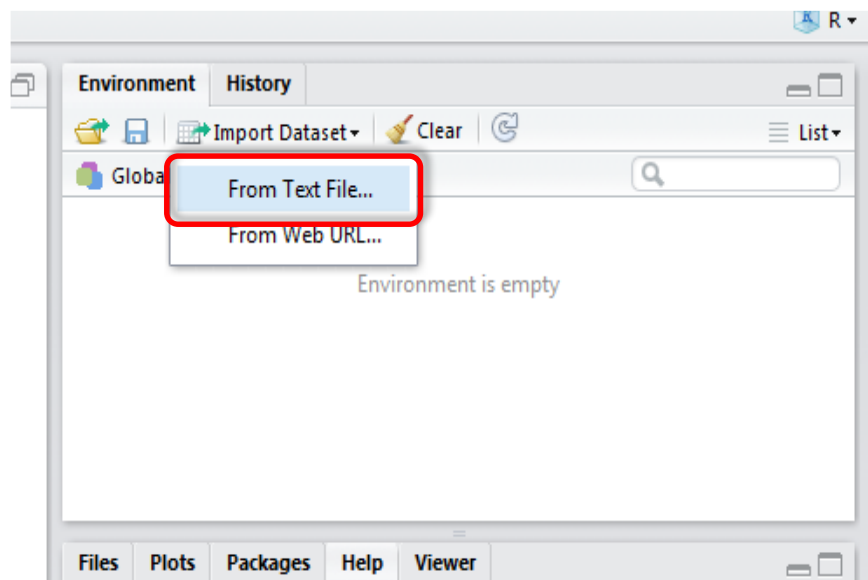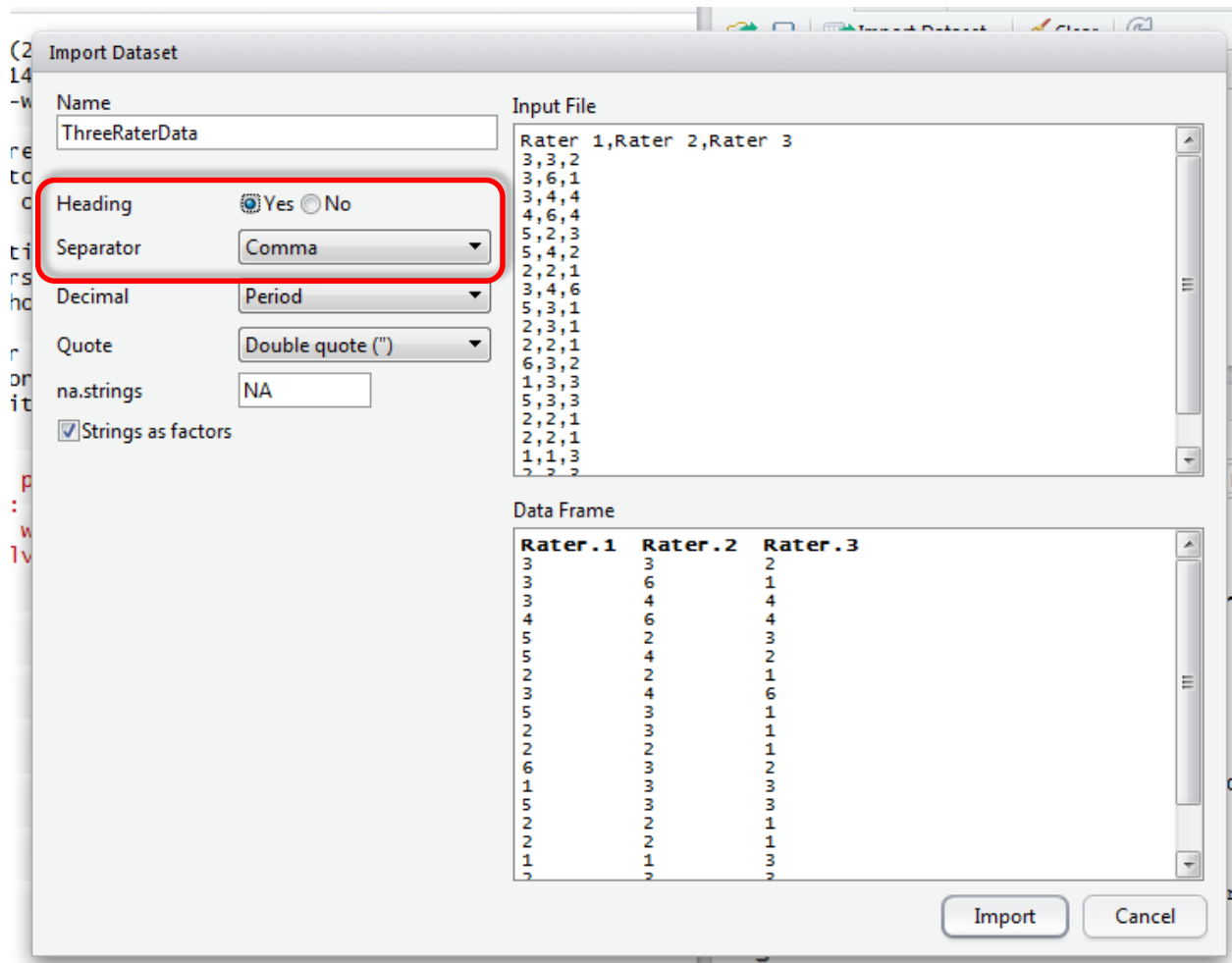

You will be given the chance to navigate to the folder in which you saved *ThreeRaterData.csv*. Navigate to the file and click *Open*.

A new dialog box should appear. This dialog is where you tell R Studio how to import the data.

(Continues upon the next page.)

You should notice the *Input File* shows that the raw dataset has headings. Thus, you must select *Yes* for *Heading*. Ensure that the *Separator* is set to *Comma* since we are use a comma separated list. With a little luck, you should see the *Data Frame* appear with bolded column headings and data streaming down along each column. Click *Import* to finish the process.

(Continues upon the next page.)
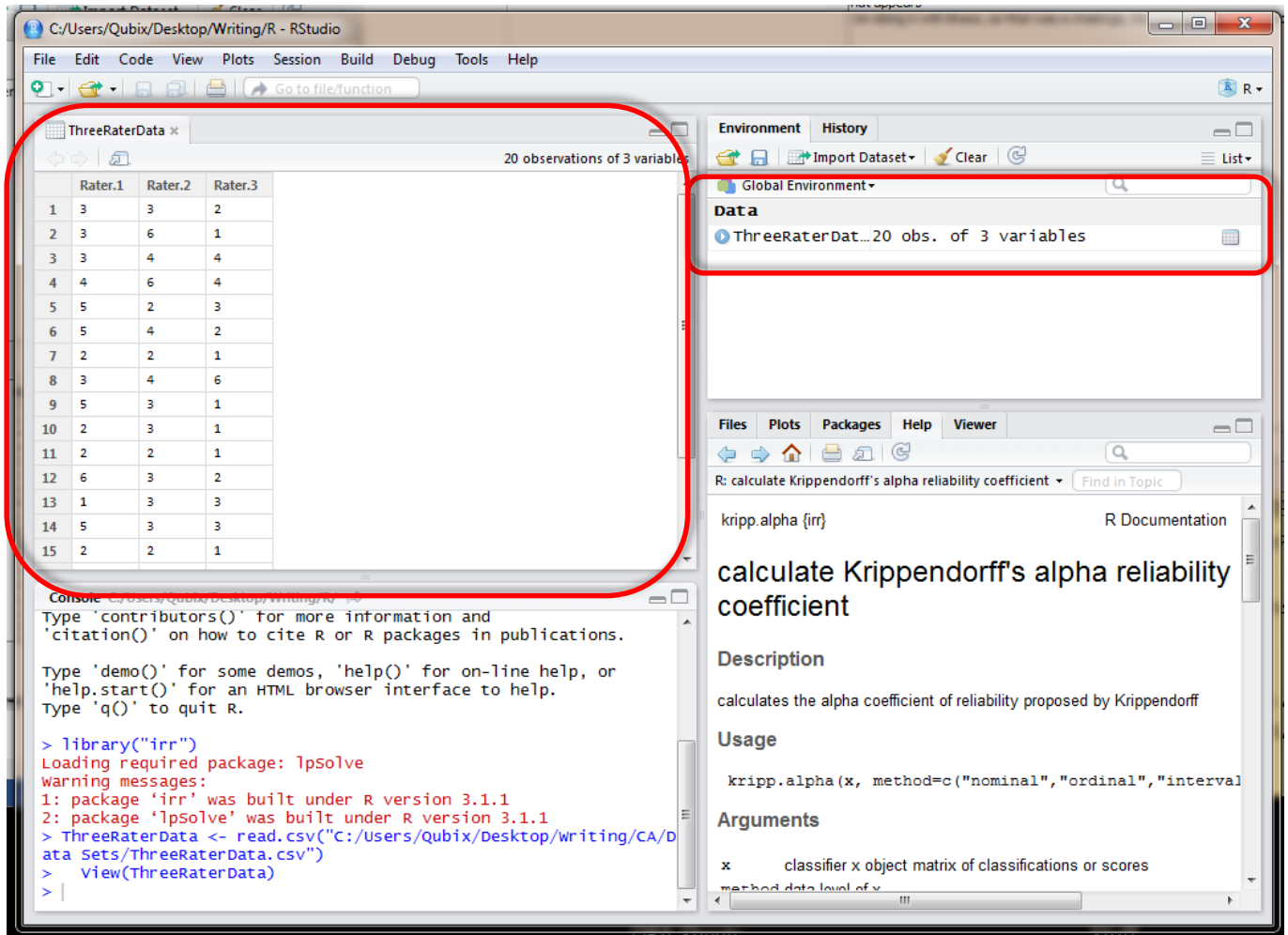
R Studio will import the data and two cool things will happen:

- The dataset will appear under *data* in the top right column. The name of the dataset is *ThreeRaterData*.
- The top of the left column will have an Excel-like display of the data.

Now the data is ready to analyze! Onto Step 5!

(Continues upon the next page.)

Step 5: Calculating Krippendorff's α

Calculating alpha for *ThreeRaterData* requires you to think about your data. Ask yourself—what kind of data is in *ThreeRaterData*? Is it *nominal, ordinal, interval,* or *ratio*? Once you figure out the answer to the question, use the appropriate *kripp.alpha()* command to determine α:

```
kripp.alpha(t(data.matrix(ThreeRaterData)),"nominal")

kripp.alpha(t(data.matrix(ThreeRaterData)),"ordinal")

kripp.alpha(t(data.matrix(ThreeRaterData)),"interval")

kripp.alpha(t(data.matrix(ThreeRaterData)),"ratio")
```

For example, if the data were ratio data, you would use the fourth choice in the above list. Thus, make sure you determine the type of data prior to calculating alpha. (Hint, what did you learn about the data while importing the CSV into R? Go look—there is a hint!) Did you find the value for α? Make sure you review the output from the *kripp.alpha()* command! The textbook tells you how to interpret α. Make sure you know the meaning and threshold values of α during this step!

You may be wondering about this cryptic part:

```
t(data.matrix(ThreeRaterData))
```

This cryptic part transposes the columns of *ThreeRaterData* into rows because *kripp.alpha()* prefers to have the data in rows.

Step 6: Calculating Percent Agreement

Percent agreement is defined:

$$Percent\ Agreement = \%A = 100 * \frac{Number\ of\ Rows\ Where\ All\ Raters\ Use\ the\ Same\ Code}{Total\ Number\ of\ Rows}$$

The *agree()* command determines the percent agreement:

```
agree(ThreeRaterData)
```

All percent agreement tells you is how often the raters agreed to use the same code for a case or observation (also called a *row*). Thus, the higher the statistic, the more often all the raters issued the same code within a row—indicating a higher degree of inter-rater reliability. Try computing it manually and check the result of *agree()*!

Make sure you can explain the importance of the calculated *%A*.

Step 7: Summarize the Data

You can obtain additional useful statistical information using the *summary()* command:

```
summary(ThreeRaterData)
```

The *summary()* command lists important data for each rater: their mean, minimum and maximum, and quartiles. You can even draw the boxplots using the *boxplot()* command:

```
boxplot(ThreeRaterData)
```

If you do not know how to read a boxplot, then watch the outstanding video at
http://stattrek.com/statistics/charts/boxplot.aspx

You may export the plot by clicking on *Export->Save as Image* as shown:
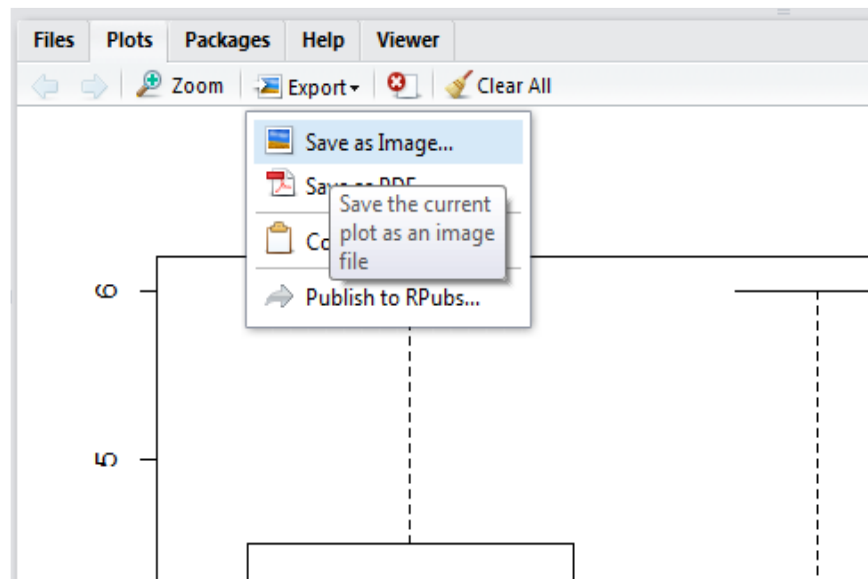
This handy trick lets you use perfectly created plots within your presentation!

Step 7: Repeat for the *FiveRaterData* Dataset

Repeat the analysis in R for the *FiveRater.csv* dataset containing ratings from five raters.

(Continues upon the next page.)

Step 8: Plan Your Presentation

Your goal for the presentation is to teach fellow classmates how to use R Studio for:

- Installing and loading the IRR library.
- Calculating and intrepreting α and *%A* for *ThreeRaterData* and *FiveRaterData* datasets.
- Computing, visualizing, and summarizing the output from Step 7.
- Interpret the meanings of everything you calculated.
- …and indicate whether one (or more) of the coders may be unreliable! (Hint: Check the boxplots.)

Ready for the challenge of R Studio? Go for it!

UNIT FIVE

This unit covers the following textbook chapters:

> Chapter Fourteen
> A Practical Guide   pages 354 to 379

Chapter Fourteen

This chapter focuses upon the ability to:

- Outline the basic strategy for developing an analysis, writing the proposal, applying the research design, and reporting the results of an analysis.

This final chapter discusses three starting points for content analyses. For each, it recommends procedural steps, raises issues that might come up during the research, notes the junctures at which content analysts need to make decisions, and suggests what they need to take into consideration in making those decisions. It gives an overview of the entire content analysis process, from conceptualizing the research questions that content analysts are called on to answer to reporting their results, providing ample references to related material in the foregoing chapters.

Reflection Activity

Integrate your responses to the following reflections questions into your reading notes:

Reflection Question 60.   Summarize the *Practical Guide* in your notes and include relevant page numbers so you can quickly find specific information within chapter 14.

Week Five Discussion Question

The purpose of the discussion question is to allow you as the student/learner to demonstrate your understanding of the chapter's key learning points and how you might apply them in given situation. Participating in the discussion question forum provides you as the student/learners an opportunity to compare your ideas to ideas from others in your class.

Instruction: Using the chapter's key learning points, provide your answer to the questions below.

> **Select a sample paper from the Content Analysis Reader and determine whether it followed Krippendorff's *Practical Guide*. How do you know? What are the telltale signs in the paper showing you whether the authors adhere to Krippendorff's recommendation? Also, make at least two suggestions improving the quality of the paper using what you learned from this class.**

Unit Five Assignment

Your assignment is to create a seminar-quality PowerPoint presentation examining articles of your choice from the Content Analysis Reader.

Important Due Dates and the Purpose of the Assignment

This assignment requires the following submission:

End of Week 5. Submit a 10-15 minute presentation conforming to the presentation assignment. You will post your presentation to the *Unit 5 Presentation Forum* and review/critique two other posted presentations.

Presentation Assignment

The goal is to create a 10-15 minute presentation using one the sample papers from the Content Analysis Reader and concepts covered in class. The presentation should focus upon:

- Whether researchers used the *Practical Guide* to create the studies and papers. The PPT needs to convince viewers of your perspectives.
- Recommending two improvements helping the paper better adhere to the *Practical Guide*.
- An opinion regarding the quality of the paper.

The presentation should integrate material from course readings as well as relevant information from previous readings. Although the presentation should strive to be complete and concise, it will likely not offer the *final word* on the project. In fact, content analysis, although systematic in nature, often reflects conflicting perspectives regarding a text—thus rarely does one perspective win the argument. Further, if you recall, you cannot reduce the text to a single meaning; hence, you should expect to think about conflicting meanings and perspectives.

You should consider using visual aids such as PowerPoint or other technique to present your project and its arguments. Make sure you provide the necessary evidence, figures, and materials to make your presentation completely a contained argument. If possible, conclude your presentation with one or two questions allowing other classmates to respond to your presentation.

The purpose of this assignment is to not only have you apply the concepts of the reading, but also see how an experienced content analyst uses what you learned about thus far in the class. In addition, fellow students will share critiques in insights into projects—making the assignment a shared learning experience.

UNIT SIX

In this final week of the course, you are required to do the following:

- Respond to the discussion questions.
- Complete the end of course survey.
- Download and save the study guide.
- Complete and submit all Unit Assignments.

Week Six Discussion Questions

- What are the key lessons that you learned in this course?
- Do you think Content Analysis may benefit you in your profession? If so, how? If not, why not?

End of Course Survey

Click on the End of Course Survey object to submit your survey.

Unit Six Assignment

Your assignment is to create a seminar-quality PowerPoint presentation examining an article of your choice from the Content Analysis Reader.

Important Due Dates and the Purpose of the Assignment

This assignment requires the following submission:

End of Week 6. Submit a 10-15 minute presentation conforming to the presentation assignment. You will post your presentation to the *Unit 6 Presentation Forum* and review/critique two other posted presentations.

Presentation Assignment

The goal is to create a 10-15 minute presentation involving one of the sample papers from the Content Analysis Reader and concepts covered in class. The presentation should:

- Critique the design, unitization, coding, validity, reliability, inferences, and comment upon the statistics of the study.
- Offer and justify six suggestions as to improve the study and its reporting.
- Ensure your presentation captures a breadth of topics and concepts from this class!

The presentation should integrate material from course readings as well as relevant information from previous readings. Although the presentation should strive to be complete and concise, it will likely not offer the *final word* on the project. In fact, content analysis, although systematic in nature, often reflects conflicting perspectives regarding a text—thus rarely does one perspective win the argument. Further, if you recall, you cannot reduce the text to a single meaning; hence, you should expect to think about conflicting meanings and perspectives.

You should consider using visual aids such as PowerPoint or other technique to present your project and its arguments. Make sure you provide the necessary evidence, figures, and materials to make your presentation completely a contained argument. If possible, conclude your presentation with one or two questions allowing other classmates to respond to your presentation.

The purpose of this assignment is to not only have you apply the concepts of the reading, but also see how an experienced content analyst uses what you learned about thus far in the class. In addition, fellow students will share critiques in insights into projects—making the assignment a shared learning experience.