# **CSC594 Content Theory of [Emotion]**

## **Gianna Rasmussen (GRV)**

**Mini Personality Content Theory:** [MB-Mini Theory GRV](https://docs.google.com/document/d/1eubltXelAGPL-2QLY0PPLdrIJCSl_akogrQ3ic31Pcc/edit?usp=sharing)

Summary: How the facets of the Myers-Briggs Personality Types can be utilized in an AI to create the optimal schedule for a college student based on their MBP Type. Tags help the AI identify what classes are best for different personality types. Priority is based on information the user inputs.

Commented On:

Peter Jachim

Genevieve Rahman

Liliana Hotsko

**Two Readings Paper:** [Two Readings](https://docs.google.com/document/d/1FScia7PcVeIbDUncRRSkEfEGcQQI8CnbmXYGc_vl32s/edit)

*Paper 1: Social support agents for older adults: longitudinal affective computing in the home*

Summary: The focus of the paper is on an AI that acts as social support to decrease feelings of and the health risks linked to loneliness, with a primary focus on the effects of such an AI on the elderly. A version of the AI was tested in the “Wizard-of-Oz” study, which was analyzed to understand the potential effectiveness of a fully developed social support agent. The AI in the study was influenced by similar studies that focused on things such as conversational agents for the elderly, artificial companions for the elderly such as robot dogs, and mood managing AI that helps clients manage anger. Previous studies seem to indicate that users tend not to see long-term effects after being taken-off the agents however seem to experience positive effects while using the agents. The results of the study have led to the planning of adding more sensors and emotional comprehension to the AI in order to focus on invoking more positive interactions and feelings from the elders.

Ring, Lazlo, Lin Shi, Kathleen Totzke, and Timothy Bickmore. 2015. "Social support agents for older adults: longitudinal affective computing in the home." *Journal on Multimodal User Interfaces* (Springer) 9: 79–88.

Opinion: The topic of the paper is interesting and the implementation and study of the social support agent seems well executed. I believe this is a worthwhile read for anyone interested in socializing agents or the development of AI that has interactive capabilities. I did find the middle a bit dry and repetitiv, the goal of the study was re-stated in every section and subsection it seemed. One thing I feel is that the study has a very limited and narrow scope due to the small size of the subject pool and the lack of randomness involved. I would love to see the scale of this study expanded so that more types of elderly people are included. It’s a worthwhile read if you have interest in the subject.

Paper 2: Emotion models for textual emotion classification

Summary: The breakdown and current understanding of how software detects and recognizes emotion from text to gather data about websites, products, and other content. The paper presents three kinds of emotional models, going from simple to more complex: categorical, dimensional, and extended. Categorical breaks down human emotions into several core emotions, the number varying depending on the theory. Dimensional suggests that there is a scale in which every word is a certain amount of each emotion, this model is used less than the categorical model and fails to account for context. Extended is a combination of categorical and dimensional and focuses on the emotion of the text group rather than the individual words.

Bruna, Ondřej, Hakob Avetisyan, and Jan Holub. 2016. "Emotion models for textual emotion classification." *Journal of physics: conference series.* 012063.

Opinion: This paper did not give me a great deal of information I have not already learned from this class, however did make me give more thought to the subject of classifying emotions. I did start to think about how odd the inclusion of surprise is in Categorical emotion models, specifically because I consider it to be a combination of usually two core emotions: fear and something else such as joy or anger. I do think this is a good paper to use as an introduction to these concepts.

Structures Outline:[Structured Outline.docx](https://docs.google.com/document/d/1hai2R3TcV0fYoWOYjzQ_1H2Qc5m05HZk/edit)

Commented On: I forgot to apparently. Whoops.

**Website:** [Not required. Put the link here if you have one associated with this project.]

Always ask yourself this question: is my content theory precise enough to be *computable*?

## **The Content Theory**

### **Description of the domain**

Give us a one-paragraph overview.

**Sample:** Humans can be seen to have a collection of (1) emotional responses to events that take place relative to their goals, (2) responsible actions that they and others perform relative to the principles they believe in, and (3) objects seen as appealing or not. These (a) may be adaptive for survival of the species (b) are ubiquitous throughout human societies (c) share many universal qualities that cross cultural boundaries. No model of human intelligence would be complete without a model of emotions generated by (1), (2) and (3) above. In this work I create a content theory of emotion based on these basic principles.

WRITE YOUR OWN OVERVIEW RELATIVE TO THE AREA IN WHICH YOU CHOOSE TO WORK.

### **Why we care about this domain**

You have 90 seconds. Why are we spending time and resources on this project? GO!

How would you respond to this question? Write your answer here.

### **Defined terms within this content theory**

### **Objects in the domain**

Give us a link to the **Google Doc containing a list of your objects**  in your own domain area.

### **Relationships in the domain**

### **Categories in the domain**

Depending on the extent of your work on categories, and category membership, if necessary, give us a link to the **Google Doc containing your categories breakdown.** Otherwise, give us the basic categories (and sub-categories) you’ve defined, here.

### **Scope of the domain**

[What are the "edges" of the domain? How do we determine what is in the domain of this content theory, and what isn't?]

[What might we expect to be in this content theory that isn't. Why?]

### **Other working documents**

[There may be many other documents, including code examples, that go into the definition of your content theory.]

## ***Basic research* arguments**

[Why this is a valid area of study to explore, sometimes without prior goals]

## **Blue-sky applications**

[Note: Be VERY careful not to propose hypothetical applications of your content theory that are unlikely to ever be achieved because of computational, complexity or other constraints. Blue-sky science is good. Fantasy is not (here).]

1. Hypothetical application one description
2. Hypothetical application two description
3. Hypothetical application three description

## **Blue-sky annotated notes on how AI technologies might apply to an implementation of your content theory**

[How might existing AI technologies be best used to implement your content theory, assuming extensive programming resources?]

Give us a link to the **Google Doc containing your notes** on how other AI technologies might apply to work in your own domain area. This discussion should contain 1,000 words to 10,000 words or more.

## **Indexed blue-sky ideas files**

Give us a link to the **Google Doc containing your blue-sky *Ideas File***

## **Best computable emotion and personality papers**

Give us a link to the **Google Doc containing your reviews** of emotion and personality papers, and papers in your chosen domain.

Include only good papers. Bonus points for introducing us to good new work! Give links to online text, and full citation: Ranked best to least:

1. Authors
   * Citation
   * Online link to text if available
   * Annotation on why we want to read it.
2. Authors

## **Bibliography**

Link to your Word-compatible XML-formatted Bibliography file

## **Implementation Notes**

* Link to time-stamped short updates on progress with your AI implementation.

## **Socket connection to your running AI server**

If you have a running AI server, give the instructions for how to connect to it here. Downloadable .java client?

## **Suggested readings with annotations**

[Links to your suggested readings with annotation saying why the paper, or website, is of interest.]

## **Video of your running AI code**

[Required on forums as well at the end of class]

## **Planning documents for this project**

[As needed]

## **Collaboration plan**

[For those working together—CLEAR division of *responsibilities* ]

* Editor of Content Theory—name
* Maintainer of the shared docs / web page—name
* Master of the running computer code—name
* Editor of the structured outlines—name
* Critique of others Editor—name
* Presentation manager—name
* Maintainer of shared documents—name

## **Shared Google (or other) documents**

* URL + description
* URL + description
* URL + description

## **Structured Outlines for papers generated by this work (with bibliographies)**

* URL + description
* URL + description
* URL + description

## ***Commented* AI Utility code snippets designed for this content theory**

* URL + description
* URL + description
* URL + description

## **Constructive scholarly critique of other student content theory Google Documents:**

* 2019-03-02 Name URL + description
* 2019-03-07 Name URL + description
* 2019-03-09 Name URL + description