

## Hands On 2 Instruction Packet

### Observational Coding

In this exercise, you will gain experience with the observational method of **content analysis**, specifically text analysis. You will use **hand-coding** as well as a demo of a **natural language processing tool** called Linguistic Inquiry and Word Count (LIWC, pronounced “Luke”; Pennebaker et al., 2022) to analyze the content of social media posts. LIWC is a computational text analysis method that behavioral scientists often use to analyze the psychological content of text, especially on online platforms where large amounts of text data are available. *If you are working together with a partner, follow the additional instructions in blue.*

#### Part I: Collect social media posts and set up coding spreadsheet

1. Download the “Hands On 2 – Reflection Questions” and the “Hands On 2 - Coding Spreadsheet” documents from Courseworks.
2. For this assignment, you will code five recent text-based social media posts from two public figures. You will be coding the posts for authenticity, analytic thinking, and emotional tone, which are described on page 3. After reading the descriptions of these constructs on page 3, pick two public figures who are on a text-based social media platform (such as Twitter/X\*, Threads, Bluesky, Reddit, Facebook, etc.) and whose communication you think may differ on one or more of these dimensions. For example, you could pick a politician and a celebrity (e.g., singer, athlete, actor) or two public figures from the same category who differ in some notable way (e.g., two politicians from different political parties, two singers who differ in age, two athletes of different genders).

*→ If you are working together, choose your two public figures together.*

*Discuss why you think their communication might differ.*

*→ Complete #1 in the Hands On 2 Reflection Questions (Each person should write their own answers to the Hands On 2 questions, although you may discuss the questions together.)*

\*Note that Twitter/X now requires an account to view tweets. If you do not have an account, you can log in with the following class account information. Please make sure to log out once you are done collecting your tweets.

username: BCRM1889

password: methods!analysis!24

3. Go to the social media page of each person. Copy-paste 5 recent **original** posts (**not reposts**) written in English into Column C of the Coding Spreadsheet under “Post text.” If the person has some very short posts, skip those and instead try to select longer posts (aim for 10 words or more, but the longer the better). In Column A, be sure to write in the name of each person under “Person 1” and “Person 2.” *(Make sure you are on the “Hand Coding” sheet of the Coding Spreadsheet.)*

- If a post pastes into multiple cells, double click into the cell where you want to add the post first, and then paste it.
- If additional text or formatting appears that was not part of the original post (e.g., written descriptions of emojis like “Smiling face”), delete those additions. You do not need to delete emojis themselves if they were part of the original post.

→ **If working together, pick the same 5 posts for each public figure. Both partners will code the posts individually, so each person should paste the posts into their own spreadsheet.**

## **Part II: Hand-code social media posts**

4. First, you will try hand-coding the posts on authenticity, analytic thinking, and emotional tone. Using the coding scheme on the following page, rate each post from 0 to 100 on each of these three dimensions. Enter your ratings in Columns D-F of the Coding Spreadsheet. (Note that rows 8 and 18 will automatically populate with the average ratings in each category as you enter your ratings, so you do not need to edit those cells.)

You may find this difficult! Normally, hand-coding is preceded by fairly intense training in research to make sure that everyone understands the codes and can apply the coding scheme reliably. In this case, just use your judgment based on the descriptions below – there is no “correct” rating.

→ **If working together, do your ratings separately. When you are both done, compare ratings and see how much you agreed. Discuss scores that you gave that were very different (why did you disagree?).**

→ **Complete #2 in the Hands On 2 Reflection Questions**

## Coding Scheme

- a. **Authenticity:** The extent to which the text reads as authentic, honest, and uninhibited. A social media post high in authenticity seems honest, unfiltered, and genuine, and reads as authentically personal, off-the-cuff, and spontaneous. A post low in authenticity seems impersonal, insincere, and socially cautious, and reads as carefully controlled, restrained, canned, or even deceptive.  
**0 = least authentic; 50 = neutral (neither authentic nor inauthentic); 100 = most authentic**
- b. **Analytic thinking:** The formality and complexity of the text. A social media post high in analytic thinking sounds academic and intellectual, using formal language, sophisticated rhetoric, and rigid/complex grammatical structure. A post low in analytic thinking sounds more intuitive and personable, using informal language, less complex sentence structure, and more casual expression.  
**0 = least analytic; 50 = neutral (neither low analytic nor high analytic); 100 = most analytic**
- c. **Emotional tone:** Whether the text is positively valenced (has a positive emotional tone) or negatively valenced (has a negative emotional tone). A social media post with positive emotional tone is joyful and happy, and uses words that convey positive sentiment. A post with negative emotional tone is sad, angry, or fearful, and uses words that convey negative sentiment.  
**0 = most negative emotional tone; 50 = neutral (neither positive nor negative emotional tone\*); 100 = most positive emotional tone**

***\*Note that 50 could mean an equal balance of positive and negative emotional tone, or it could mean that the post is not emotional in either direction.***

## Part III: Analyze posts with LIWC

- Next, you will try using the LIWC Demo to get a sense of how LIWC works (the full software requires payment so we'll stick with the free demo). Visit <https://www.liwc.app/demo>.

### ANALYZE YOUR TEXT

Type or paste the text that you want to have analyzed into the box below. After you click "Analyze" you will receive a select set of LIWC-22 results for your text. There is currently a 5,000 character limit (approximately 1,000 words) on any given text. Your submitted text may be saved and used to fine-tune future versions of LIWC.

Note that this web demo is currently only able to analyze texts in the English language. The results that you receive from this online demo may differ slightly from the results calculated by the official LIWC-22 desktop application.

How would you classify this text?

Social media (e.g., Twitter, Reddit)

Enter your text here:

"Solidarity with the courageous women and allies in Iran protesting for their freedom.

Mahsa Amini was senselessly murdered by the same patriarchal and autocratic forces repressing women the world over.

The right to choose belongs to us all, from hijabs to reproductive care."

ANALYZE TEXT

- Select "Social media (e.g., Twitter, Reddit)" in the dropdown menu at the top.
- Paste your first post into the text box (where it says "Paste/write your text here"). If there were emojis that were converted to text descriptions (e.g., "smiling face"), delete those descriptions (but it is fine to keep actual emojis). Click "Analyze text."
- The LIWC demo gives a variety of information about your text data (self-focused I-words, social words, etc.). For more information about the LIWC output, see [here](#). We will be using the rows labeled Positive Tone, Negative Tone, Analytic, and Authentic, which give LIWC's language-based computational analysis of emotional tone, analytic thinking, and authenticity.

Note that the full LIWC software uses the Positive Tone and Negative Tone variables to compute one overall variable for Emotional Tone. In the current demo released in 2022, they have withheld some of the overall variables (presumably to try to make us buy the software!). Thus, the coding spreadsheet uses the Positive Tone and Negative Tone variables to compute Emotional Tone ourselves.

Enter the "Authentic" score for the post into column D, enter "Analytic" score into column E, enter "Positive Tone" score into column F, and enter "Negative Tone" score into column G. Column H will automatically compute the Emotional Tone score for each post as you go along.

## RESULTS

Traditional LIWC Dimension	Your Text	Average for Social Media Language
I-words (I, me, my)	0.00	5.44
Positive Tone	6.98	5.93
Negative Tone	4.65	2.34
Social Words	13.95	6.74
Cognitive Processes	6.98	8.86
Allure	4.65	8.62
Moralization	2.33	0.27
<b>Summary Variables</b>		
Analytic	99.62	47.06
Authentic	11.94	62.38

9. Repeat this process for each of the 10 posts.  
 → **Complete #3 in the Hands On 2 Reflection Questions. When comparing your hand-coded ratings and LIWC results, you can go to the third tab of the Coding Spreadsheet called “Means” for an easy view of the hand-coded and LIWC means for each public figure.**

## Part IV: Correlations between your ratings and LIWC scores

10. Go to the “Comparison” tab of the Coding Spreadsheet. This sheet should have already automatically populated with all of the ratings and LIWC scores you entered on the Hand Coding and LIWC sheets. You do not need to enter or change anything on the Comparison sheet.

This sheet has calculated correlations between your ratings and LIWC’s scores for each rating dimension separately (authenticity, analytic thinking, and emotional tone), as well as overall across dimensions. The correlation coefficients can be interpreted as follows (Dancey & Reidy, 2007):

Correlation coefficient	Interpretation
< 0	<b>Negatively correlated</b> (your ratings and LIWC scores are opposing – as your ratings went up, LIWC scores went down)
0	<b>Not correlated</b> (your ratings and LIWC scores did not correspond at all)

0.1 - 0.3	<b>Weak correlation</b> (your ratings weakly corresponded with LIWC scores)
0.4 - 0.6	<b>Moderate correlation</b> (your ratings moderately corresponded with LIWC scores)
0.7 - 0.9	<b>Strong correlation</b> (your ratings strongly corresponded with LIWC scores)
> 0.9	<b>Extremely strong correlation</b> (your ratings almost perfectly corresponded with LIWC scores)

→ **Complete #4 in the Hands On 2 Reflection Questions**

**When you are done with the assignment, please remember to upload your completed Reflection Questions document and your completed Coding Spreadsheet.**