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Hello, and thank you for tuning into my presentation. My name is Alan Rodriguez Tiburcio. I am a senior undergraduate at Portland State University in the College of Liberal Arts and Sciences.

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Today I will be presenting my research proposal, fully titled The influence of common social media video lengths on the attention of undergraduate students.

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In this presentation, I will go over the leading questions that direct my inquiry, the theoretical framework from which I'm working, the dependent variables and how they will be measured within set framework, the experimental design, including the experimental

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condition, and using data simulated by my advisor, Dr. Nicholas Smith, I will conduct a data analysis and interpretation to elucidate my inquiry.

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Finally, I will provide a critique and areas of improvement for my design.

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The leading questions were produced after observing the emergent phenomena that is social media, and in particular the rise of TikTok, and short video content, this phenomena leads me to ask, how do the varying forms of video content, influence our

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attention spans.

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Does the viewing of shorter video content influence our attention in a manner significantly different from longer content, such as YouTube or streaming services.

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My framework is fundamentally cognitivist; presupposing cognition, as functionally computational.

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I will be using the model put forth by Wilder, et al. in 2019, called the task specific and spatial scale control, or TASC model.

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This model posits that reflexive or exogenous attention share underlying mechanisms with voluntary or endogenous attention.

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It posits that these two types of attention rely on two specific dimensions, a task specificity and a spatial scale dimension.

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This is illustrated in the bottom left hand corner.

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This research proposes operationalize endogenous attention, using the d2 test of attention.

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The most frequently used in Europe, this test is more recently been validated for American populations. The d2 tests of attention is a cancellation test, in which similar stimuli are presented at the same time,

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In 14 sequential trials.

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The goal is to eliminate all the targets, which are ‘d’s with two dashes above or below, while ignoring non target characters, which are visually similar. Participant results would be standardized, and compared using the test error rate as a percentage,

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which would be calculated by taking the total number of errors and dividing them by the total number of responses.

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In addition, this research proposes operationalizing exogenous attention, using the Posner cueing task. First developed by Michael Posner in 1980. This is a spatial queuing assessment, evaluating a participants ability to shift attention, as illustrated

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in the bottom left hand corner, a participant will focus on the fixation point and attention cue will appear at random, followed by a time delay before an X appears in either box, the participant response to the stimuli and their average reaction time

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for both valid, an invalid cues will be recorded and compared.

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the experimental condition will involve splitting participants into three groups, a participant will either go into the brief, intermedial, or protracted video length condition which will determine the length of video content that they will continuously

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view for 30 minutes. My hypothesis is that the shorter video length condition will positively relate to reduce attention in our measures, which would mean higher reaction times, and larger error rates.

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Participants will have their attention to assess before and after the experimental conditions, and the pre test scores will be used as covariance in a multivariate analysis of covariance. Using data simulated by Dr.

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Nicholas Smith, I conducted the analysis to elucidate my research proposal.

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First, I tested the simulated data is pre test and post test scores, using two simple t test to confirm that there was a significant difference before and after the hypothetical video length condition, without yet accounting for said condition.

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I then tested the assumptions required for conducting a MANCOVA, which the data were able to pass with flying colors.

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I then conducted the multivariate analysis of covariance using R, which confirmed that there were significant differences between the three groups.

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I confirmed this using Wilkes lambda which reported a large F value of 44.005 and a small p value of smaller than point 001.

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Thus, I was able to reject the null hypothesis and bolster the notion that exogenous and endogenous attention might share cognitive mechanisms.

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I then conducted to univariate ANCOVAs to evaluate each measure of attention independently.

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It reported that endogenous attention still very significantly by video length condition, reporting and F statistic of 227.72 and a p value less than alpha.

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Similarly, exogenous attention still very significantly by video length condition reporting an F statistic of 737.86, and a p value less than alpha.

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I then ran Tukey’s HSD as a post hoc evaluation and found that all conditions were statistically significant when compared to one another.

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Further, this revealed that the shorter video length condition did correlate with worse attention scores across the board.

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In conclusion, based on the results from the simulated data, I would be able to confirm that relative to longer video length conditions, shorter video length conditions ostensibly reduced exogenous and endogenous attention, as measured by the poster

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cueing task and d2 test of attention respectively.

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Furthermore, this design could be improved upon in three key ways. First, given the subject matter. The video length condition could be constructed as a continuous variable to allow for more powerful linear model, while still having the participants watch

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the videos for the same length of time.

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Second, in praxis, the video content would benefit from being similar across the board, and thus to some degree choreographed.

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Third, the outputs from the d2 test of attention and Posner paradigm produce more data than was used in this design; these data could be of use for a design intending to focus on either exogenous or endogenous attention in more detail.

These were the references that informed my research. Thank you for listening.