PAI 705 Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Exam 1

McPeak March 25, 2021

Exam is 20 points. There are 10 questions. Each question is worth 2 points. If there are sub questions, each part is worth an equal share of the 2 points.

1. Elements of social theory.
2. Describe the relationship between observations and theory when using inductive reasoning.

1. Describe the relationship between observations and theory when using deductive reasoning.
2. If I develop a model and use it to formulate a hypothesis that I test using data, am I following inductive reasoning or deductive reasoning? Explain briefly your reasoning for your answer.
3. We discussed three purposes of social science research. Below are listed three short descriptions of social science research. For each, identify which is the main purpose of the research based on those three purposes.

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| Research Description | Purpose |
| The PAIA department is trying to predict the number of students that will attend classes in person (not remotely) if the social distancing rule is changed from 6 feet to 3 feet. They have set up an online survey of all students to ask whether they intend to attend classes in person if the distance rule is changed to 3 feet on April 1st. This information is required by the registrar’s office to ensure room capacity will be sufficient for the number of students intending to participate in person. |  |
| A research team is investigating Covid 19 vaccine demand in Tanzania. They have organized four meetings in March 2021 with the following groups: 20 women in a rural area, 20 men in a rural area, 20 women in an urban area, and 20 men in an urban area. They hope to use the results of the interviews to design a survey that will be conducted in September 2021 with a large random sample of the adult population in Tanzania. |  |
| Two recent surveys of a cash transfer program in Zambia have led to puzzling results. The ‘treatment’ group, those who get the transfers, is reporting higher levels of food insecurity than the ‘control’ group, who do not get the transfers. It also appears that over time the ‘treatment’ group has become more food insecure than they were in the baseline survey. A researcher proposes that since selection into the program is based on local officials identifying food insecure households for selection into the ‘treatment’ group, and these officials also determine when households will ‘graduate’ from the program and no longer get benefits, people may be answering the self-reported food security questions strategically to remain eligible for the program. The researcher has designed a study to contrast results using household self-reported food insecurity measures with direct measurements of the mid-upper arm circumference of children aged 6 to 60 months and body mass index measures for children under 16. They believe these direct measurements will identify the true impact of the cash transfer program and also identify the reason for the puzzling self-reported food insecurity results. |  |

1. Research Ethics.
   1. What are the three basic ethical principles of the Belmont Report?
   2. Explain why special care is needed when conducting research on people who are incarcerated.
   3. Explain why there can be a tension between the objective of ensuring informed consent of study participants and the Hawthorne effect.
2. Measurement Issues.

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| Measured item | Category of this measured item (circle one) |
| The number of Covid 19 tests performed at the Dome during class time today. | Direct observable Indirect observable Construct |
| The total number of tests each of these people say they have had since March 2020. | Direct observable Indirect observable Construct |
| The degree of vaccine enthusiasm or hesitancy for SU staff and faculty measured on a Likert 5-point scale. | Direct observable Indirect observable Construct |
| Is it raining where you are currently. | Direct observable Indirect observable Construct |
| The degree of state fragility as reported on the Fragile States Index. | Direct observable Indirect observable Construct |
| The number of students in this class who are not US passport holders. | Direct observable Indirect observable Construct |
| The quality of ‘rule of law’ in a country as measured by the World Bank’s governance indicators. | Direct observable Indirect observable Construct |
| The number of available in-person seats under current distancing rules in the room where we have this class. | Direct observable Indirect observable Construct |

1. Index and scale issues.

Assume you have results from a survey of the US public on possible actions in response to the imprisonment of Alexei Navalny by the Russian government.

Approach A

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| Statement | Responses (Circle One) |
| The United States government should publicly condemn the Russian government’s imprisonment of Navalny. | Agree Disagree |
| The United States government should impose financial sanctions on Russian government officials involved in his arrest. | Agree Disagree |
| The United States should impose a trade embargo on Russia similar to the embargo placed on Iran until Navalny is released. | Agree Disagree |
| The United States should impose a trade embargo on Russia similar to the embargo placed on Iran until Navalny is allowed to run against Putin in a free, fair, and transparent election. | Agree Disagree |

1. Explain how you could treat the results for this question as an index and contrast how you could use the results as a scale.
2. What are the scale types if we are to use this as a scale?
3. Explain how you could look at the pattern of the responses and contrast them to the scale types to evaluate whether you wanted to treat the results as a scale or an index.
4. True or False.

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| Statement | Is it True of False (circle) |
| Anonymity means a given response cannot be linked to a given respondent even by the researcher. | True False |
| Ideographic explanation seeks an exhaustive understanding of the causes producing events and situations in a single or limited number of cases. | True False |
| Positivism asserts that in social science, scientific truth can be positively verified by empirical observation and logical analysis of what is observed. | True False |
| The individualistic fallacy is applying what we learned about the whole to the individuals making up the whole | True False |
| Precision is a criterion of measurement quality | True False |
| Predictive validity is the degree to which a measure relates to other variables as expected within a system of theoretical relationships. | True False |
| A panel study monitors a given characteristic of the population over time using different samples. | True False |
| Unidimensionality means values of the measure can be thought of as a number line with different observations corresponding to different points along the number line | True False |

1. Measures.

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| **Item measured** | **What kind of measure is it? (circle)** |
| Current enrollment status in Syracuse University of people living in the 13210 zip code (the neighborhood around the SU campus). | Nominal Ordinal Interval |
| Pain intensity on a Wong-Baker FACES pain rating scale | Nominal Ordinal Interval |
| The dollar amount of the Economic Impact Payment individual taxpayers received in the United States in 2020. | Nominal Ordinal Interval |
| Current GPA in your master’s program | Nominal Ordinal Interval |
| Ranking of the best IR masters programs for a policy career in IR. | Nominal Ordinal Interval |
| Which career tracks in the IR program are people in this class in? | Nominal Ordinal Interval |
| Did you write a summary and evaluation for the TRIP report? | Nominal Ordinal Interval |
| Meghan and Harry interview with Oprah, good idea or bad idea? | Nominal Ordinal Interval |

1. “Opinion polls consistently report that Americans believe foreign aid is in the range of 25 percent of the federal budget. When asked how much it should be, they say about 10 percent. In fact, at $39.2 billion for fiscal year 2019, foreign assistance is less than 1 percent of the federal budget.” ([Ingram, Brookings, October 2019](https://www.brookings.edu/opinions/what-every-american-should-know-about-u-s-foreign-aid/) but don’t check it right now!!!)
   1. Evaluate this from the standpoint of reliability.
   2. Evaluate this from the standpoint of validity.
2. Elements of social theory.

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| Put name below for each | Definition |
|  | A phenomena that has been observed |
|  | A systematic explanation for why we are seeing the specific observations we are seeing. |
|  | An abstract element representing classes of phenomena within a field of study |
|  | Fundamental assertion about what is true |
|  | Prediction about the relationship between concepts |
|  | Seeing, hearing, touching, tasting, smelling |
|  | Universal generalization about classes of facts |

Choices are: Axiom, Concept, Fact, Law, Observation, Proposition, Theory

1. Which of the following define the criteria for nomothetic causality for two variables? Circle the letters.
   1. The measurement of the variables is reliable.
   2. The variables have attributes that are ordinal.
   3. The variables are statistically correlated.
   4. The data set from which the variables are drawn is longitudinal in nature.
   5. The relationship between the two variables cannot be explained by an omitted third variable.
   6. There is a temporal ordering of the two variables that defines a cause and an effect.