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

Exam 1

McPeak March 10, 2022

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. Where does formulating a testable hypothesis take place in comparison to observations and theory in deductive research?
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.

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| Research Description | Purpose  |
| The International Relations faculty are reviewing the profile of applicants for fall 2022 entry into the program to compare it to the profile of the fall 2021 entrants. The report contains mean, median, and standard deviation values on: age, undergraduate GPA, and reported years of professional experience. . |  |
| We are trying to understand how livestock markets operate in Nigeria. For this phase of the research project, we have contracted local consultants to visit livestock markets and develop a list of all the different kinds of jobs people do in these markets. We will follow up after his phase is complete with a questionnaire based on what we learn. |  |
| I am researching price formation in livestock markets. I have information on the buyers, sellers, animals, pasture conditions, and insecurity in the region surrounding the market. I am regressing the price per animal on these other variables to identify what factors have significant positive or negative impacts on the observed selling price. I am trying to see if gender and wealth of the seller have identifiable impacts on the sales price of livestock holding all the other variables constant.  |  |

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 not adults.
	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 COVID 19 positivity rate for Onondaga County reported by the Health Commissioner for last week. | Direct observable Indirect observable Construct |
| The number of people taking this test using a pencil and the number using a pen. | Direct observable Indirect observable Construct |
| The relative resilience of households in Mali. | Direct observable Indirect observable Construct |
| Snowfall total for this winter at Hancock International Airport. | Direct observable Indirect observable Construct |
| State fragility. | Direct observable Indirect observable Construct |
| Where was each person in PAI 705 this semester born? | Direct observable Indirect observable Construct |
| The quality of ‘voice and accountability’ in a country as measured by the World Bank’s governance indicators. | Direct observable Indirect observable Construct |
| The number of cats in this room right now. | Direct observable Indirect observable Construct |

1. Index and scale issues.

Assume you have results from a survey of the US public on daylight savings time.

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| Statement | Responses (Circle One) |
| Adjusting clocks for daylight savings time is annoying | Agree Disagree |
| Adjusting clocks for daylight savings time should be phased out over time. | Agree Disagree |
| Adjusting clocks for daylight savings time should be immediately halted | Agree Disagree |
| Adjusting clocks for daylight savings time should be punished by criminal penalties | 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 what is meant by the ‘coefficient of reproducibility’ and how it can be used to evaluate when responses can be treated as a scale or an index.
4. True or False.

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| Statement | Is it True of False (circle) |
| Confidentiality means a given response cannot be linked to a given respondent even by the researcher. | True False |
| A necessary condition is one of the things that must happen, along with other necessary conditions that must happen, for an outcome to happen. | 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 |
| Reliability 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 cohort study identifies a specific population age cohort and surveys them repeatedly over time drawing different samples each time. | True False |
| Typologies are nominal classifications of observations in terms of the values of two or more variables.  | True False |

1. Measures.

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| **Item measured** | **What kind of measure is it? (circle)** |
| Who in this class wrote the first memo and who did not? | Nominal Ordinal Interval  |
| The Likert responses to the “Sea Shell’ Super Bowl ad for this class. | Nominal Ordinal Interval  |
| The monetary value of different assistantships offered to different students in the incoming fall 2022 IR cohort. | Nominal Ordinal Interval  |
| Current GPA of students in the IR master’s program | Nominal Ordinal Interval  |
| Hours spent studying for this exam by the students in this class. | Nominal Ordinal Interval  |
| In which IR program career tracks are the people in this room? | Nominal Ordinal Interval  |
| Risk perceptions as measured by asking people first are they concerned about a given risk on a list and then asking them to rank the yes responses from most concerned to least.  | Nominal Ordinal Interval  |
| The total amount spent on textbooks by people in this class over the past 12 months. | 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 |
|  | An abstract element representing classes of phenomena within a field of study |
|  | A systematic explanation for why we are seeing the specific observations we are seeing. |
|  | Prediction about the relationship between concepts |
|  | Universal generalization about classes of facts |
|  | Seeing, hearing, touching, tasting, smelling |
|  | Fundamental assertion about what is true |
|  | A phenomenon that has been observed |

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

1. Definitions and contrasts.
	1. Contrast a panel and a cross sectional data set.
	2. Contrast a trend study and a cohort study.
	3. Contrast a unit of observation and a unit of analysis.
	4. Contrast content validity with construct validity.