
Appendix B

NC State Comps Questions

MPA Comprehensive Exam
Study Guide

Competency guide for Public Organization Theory (Romanova)

Classical Organization Theory	Fayol (1949) General Principles of Management in General and Industrial Management Taylor(1916) Principles of Scientific Management in Bulletin of the Taylor Society Weber (1946) Bureaucracy in Essays in Sociology Gulick (1937) Papers on the Science of Administration
Neoclassical Organization Theory	Barnard (1966)The Functions of the Executive Merton (1957) Social Theory and Social Structure Simon (1946) Proverbs of Administration, PAR 6 1946
Modern Structural Organization Theory	Burns & Stalker (1961) The Management of Innovation Blau & Scott (1962) Formal Organizations Walker and Lorch(1968) Organizational Choice: Product versus Function, Harvard Business Review, Nov. 1968 Mintzberg (1979) The Structure of Organizations Jaques (1990) In Praise of Hierarchy, Harvard Business Review Jan.1990
Decision Theory	Charles Lindblom (1959): The Science of Muddling Through
Rational Choice Theory	Anthony Downs (1967): Inside Bureaucracy William Niskanen (1971): Bureaucracy and Representative Government Elinor Ostrom (1998): A Behavioral Approach to the Rational Choice Theory of Collective Action (in APSR 92:1-22)
Human Resource Theory, or the Organizational Behavior Perspective	Follet (1926)Scientific Foundations of Business Administration Roethlisberger (1941) Management and Morale Maslow (1943) A Theory of Human Motivation, Psychological Review 50 1943 McGregor (1957) The Human Side of Enterprise
Systems Theory and Organizational Economics	Katz & Kahn (1966) The Social Psychology of Organizations Thompson (1967) Organizations in Action
Theories of Governance	Donald Kettl (2000): The Global Public Management Revolution: A Report on the Transformation of Governance Laurence Lynn et al (2001): Improving Governance: A New Logic for Empirical Research B. Guy Peters and John Pierre (1998): Governance Without Government? (JPART 2:223-243) H. George Frederickson (1999): The Repositioning of American Public Administration in PS 32(4)701-711
Power and Politics in Organizational Theory	Pfeffer (1981) Power in Organizations Kanter (1979) Power Failure in Management Circuits, Harvard Business Review, July 1979

	Mintzberg (1983) Power in and around organizations
Theories of Political Control of Bureaucracy	Dwight Waldo (1948); The Administrative State Michael Lipsky (1980): Street Level Bureaucracy Wood and Waterman (1994): Bureaucratic Dynamics: The Role of Bureaucracy in a Democracy
Theories of Bureaucratic Politics	Dwight Waldo (1952): Development of Theory of Democratic Administration Graham Allison (1971): Essence of Decision Harold Seidman (1998): Politics Position and Power: The Dynamics of Federal Organization
Organizational Culture and Sense Making	Schein (1985) Organizational Culture and Leadership Louis (1983) Organizational Symbolism
Theories of Public Institutions	James Q. Wilson (1989): Bureaucracy: What Government Agencies Do and Why They Do it. James March and Johan Olsen (1989): Rediscovering Institutions

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You should have a strong grasp of the literature read in the course. Additional readings are noted in parentheses next to the subject matter with which I wish you to be familiar.

You should know the following units of analysis and theoretical approaches:

- Individual rational choice and its criticisms (Donald P. Green and Ian Shapiro, *Pathologies of Rational Choice Theory: A Critique of Applications in Political Science* (New Haven: Yale University Press, 1994), ch. 1).
- Group theories: pluralism, corporatism (see Phillippe Schmitter “Still the Century of Corporatism?” *Review of Politics* 36 (1974): 85-131), Olson’s selective benefits theory, Marx’s theory
- Institutions (see also Gary Cox “On the Effects of Legislative Rules.” *Legislative Studies Quarterly* 25 (2000):169-192); James G. March and Johan P. Olsen, “The New Institutionalism: Organizational Factors in Political Life,” *American Political Science Review* 78 (1984): 734-49.

You should know the following macro-theories of the policy process:

- Institutional rational choice
- Advocacy coalitions
- Diffusion/innovation
- Stages approach
- Policy streams

You should have some familiarity with these important theoretical questions:

- Agenda setting (Gary Cox, "Agenda Setting in the U.S. House: A Majority Party Monopoly?" *Legislative Studies Quarterly*, 26 (2001): 185-210.
- Representation (James A. Stimson, Michael MacKuen, Robert S. Erikson, "Dynamic Representation", *American Political Science Review* 89 (1995): 543-65.
- Principal-Agent Theory

COMPETENCY GUIDE FOR FOUNDATIONS OF PUBLIC ADMINISTRATION

One broad question will be completed for this portion of the exam. Students will have two questions from which to choose. The answer will require synthesis of the material used to answer the following questions and definitions of key concepts given below:

- ❑ What is the nature of public administration, and how has it developed as a field? What are the tensions between the big and little questions of public administration?
- ❑ What are the issues in the relationship between the public, politicians, and administrators? To whom are administrators accountable?
- ❑ What are the tensions between democracy and "bureaucracy," and how can they be reconciled?
- ❑ What are the tensions between promoting administrative self-interest and the public interest, and how can they be reconciled?
- ❑ What is the normative base of public administration, i.e., values that guide practice? How does one reconcile "neutrality" and commitment to values in public administration? Is ethics essential to public administration?
- ❑ What does the "public" in public administration really mean? What is the

impact of the modalities of implementing public administration on this concept?

- ❑ How does public administration legitimize its activities?
- ❑ What are the alternative bases of administrative ethics?

Key Concepts

Accountability

Bureaucracy

Citizen participation; how administrators relate to citizens

Complementarity - Political-administrative relations

Democracy

[Dichotomy] Political-administrative relations

Ethics

Internalized / External control: complexities of accountability [e.g., Principal-Agent and/or principled agent]

Governance, new

History

Implementation, Networks, and Nonprofits in Public Administration

Intellectual issues: PA as field of study

Leadership

Legitimacy

Models of PA Evolution, overlap, and coexistence of models

Classical model – Differentiation of functions

Orthodox model – bureaucracy/principles of administration/scientific management

Political and institutional models

Normative model

- Waldo

- New PA
- Refounding/efforts to establish legitimacy of public administration

Public Choice/NPM

- Principal-Agent

Neutrality: active/expansive definition versus passive/narrow definition

Public interest vs. self-interest

Public vs. Private Administration

The Public

Roles and responsibilities

State agent/citizen agent

Ph.D. Methods Prelims Questions for Summer 2002

1) Research Design has been defined as largely defined as a matter of control. Discuss statistical versus physical control and relate each to a specific type of research design, for example, experimental versus quasi_experimental design. What is internal validity? What is external validity? List and define the principle threats to internal validity. Can a study have high internal validity and lack external validity? Explain and provide a concrete example.

2) Much research in the social sciences is based on taking a sample of respondents, testing hypotheses about the relationships found in the sample data, and, then making some inference about the likelihood that the relationship found in the sample data would be true if the entire population had been tested. In this regard, define and discuss the following: (a) probability samples vs non_probability samples. (b) The differences between statistical significance and substantive importance. (c) Power, Type I and Type II error. (d) The null hypothesis. (e) Reliability and validity of measures.

3) What is the difference between randomization and random sampling? Relate each to internal and external validity, and, to the concept of control. Why do researchers have more confidence in saying that the independent variable affected the dependent variable in a research design in which randomization has taken place?

4) Women faculty members at Waterford Central University (WCU) have filed a sex discrimination suit against the university. You are a newly_hired associate in the firm that represents the plaintiffs. The deposition of the university's expert has already been taken. The transcript reveals that the expert performed two multiple regression analyses on the faculty salary data. In the first, salary was the dependent variable with the independent variables being:

- (1) the mean salary of the department
- (2) experience as an instructor at any university, including WCU
- (3) experience as a faculty member other than at WCU
- (4) experience as a full professor at WCU
- (5) experience as an associate professor at WCU
- (6) experience as an assistant professor at WCU
- (7) possession of a doctoral degree other than a Ph.D.
- (8) possession of a Ph.D. degree

The expert's second regression analysis is identical to the first except that sex is added in the form of a dummy variable having the value of 1 for males. The coefficient for the sex variable in the university's second analysis is \$694 (per year) and its associated t_{ratio} is 2.3. The first model (without sex as a factor) had an r^2 of .524 percent while the second model (with sex as a factor) had an r^2 of .532. According to WCU expert's testimony, the \$694 coefficient for sex in the second model does not indicate discrimination against women because the model with sex as a factor explained only .8 percent more of the total variation around the average salary than did the model without sex:

The researcher also applied the first multiple regression model, without the sex variable, to each faculty member to get a prediction of the salary that each should be earning. They then compared each prediction to the faculty person's actual salary. Some, 343 men were paid less, and 302 more, than the model predicted they would be paid, while 61 women were "underpaid" and 55 "overpaid."

A more senior associate has found a case that went to trial on virtually identical facts to the present one. In that earlier suit, the defendant prevailed in a bench trial. The partner directing the litigation solicits your comments. She worriedly notes that "If I understand what the WCU expert is saying, I'm troubled myself that adding the gender variable has hardly any effect. Still, I thought that the \$684 coefficient was pretty good for us." What can you tell the partner that be useful either in assessing what's going on here or in attacking the thrust of the expert's argument?

5) Describe the use of principal components analysis (PCA) as a dimension_reduction technique. Comment on the following in this description: a) selecting the number of dimensions / components; b) calculating new data or new variables from the eigenvectors; c) the relation between the new components, and the relation of the new components to the multivariate indicators.

6) Interpret the logistic regression output in the appendix, which in which a researcher is trying to assess whether four survey items (Q1 through Q4) differentiate husbands and wives (SPOUSE, 1= husband, 2= wife). *(Note – Appendix did not reproduce clearly and is not included here)*

7) Describe the use of structural equation modeling in testing hypothesis of causal structure and latent structure in a multivariate set of data. Comment on the following the difference between the “structural” and the “measurement” model. Also, comment on the following aspects of this technique: i) constructing path models and equations; ii) the problem of model identification; and iii) estimates of model fit. Distinguish (or compare similarities) principal components analysis, factor analysis, confirmatory factor analysis, and structural equation modeling in how the techniques estimate unknown (latent) variables from known (indicator, overt) variables.

Summer 2003 Written Preliminary Examination – PhD in Public Administration
Methodology

1) Research Design has been defined as largely as a matter of control. Discuss statistical versus physical control and relate each to a specific type of research design, for example, experimental versus quasi-experimental design. What is internal validity? What is external validity? List and define the principle threats to internal

validity. Can a study have high internal validity and lack external validity? Explain and provide a concrete example.

2a) Much research in the social sciences is based on taking a sample of respondents, testing hypotheses about the relationships found in the sample data, and, then making some inference about the likelihood that the relationship found in the sample data would be true if the entire population had been tested. In this regard, define and discuss probability samples vs non-probability samples.

2b) Which sampling design would best address the following? You are a city manager and you want citizen feedback on a new diversity program. You have a very small proportion of African Americans, Hispanics and Asians in your city, yet you want to be sure you get feedback from them in a large-scale citizen survey.

3) What is the difference between randomization and random sampling? Relate each to internal and external validity and to the concept of control. Why do researchers have more confidence in saying that the independent variable affected the dependent variable in a research design in which randomization has taken place? What is the only type of research design in which random assignment of subjects to treatment groups is possible?

4) When is multicollinearity important in multivariate statistical procedures? When is it unimportant? Explain how multicollinearity is tested. If multicollinearity is found, what can be done about it?

5) What is cross-validation? Although always desirable, when is it most needed and why?

6) Non-constant error variance may indicate violation of which common assumption of statistical procedures in the multiple general linear hypothesis family?

7) Outliers are undesirable because they imply violation of which two common assumptions of statistical procedures in the multiple general linear hypothesis family?

8) Explain attenuation.

9) Describe the use of principal components analysis (PCA) as a dimension-reduction technique. Comment on the following in your description: a) selecting the number of

dimensions / components; b) calculating new data or new variables from the eigenvectors; c) the relation between the new components, and the relation of the new components to the multivariate indicators.

10) If an independent variable has a logistic coefficient of 1.476, how can this be interpreted in a plain-English sentence that renders some intuitive meaning to the reader.

11) Describe the use of structural equation modeling in testing hypotheses of causal structure and latent structure in a multivariate set of data. Comment on the following the difference between the “structural” and the “measurement” model. Also, comment on the following aspects of this technique: i) constructing path models and equations; ii) the problem of model identification; and iii) estimates of model fit. Distinguish (or compare similarities) among principal components analysis, factor analysis, confirmatory factor analysis, and structural equation modeling in how the techniques estimate unknown (latent) variables from known (indicator, overt) variables.

Foundations, Theory, and Policy

June 27, 2005

I. Organizational Theory: Answer the following question

Compare and contrast the pre-theoretic frameworks – Systems, Humanistic/Organizational Behavior, Rational Choice, and Post-Modern – in light of a specific problem or substantive issue.

II: Policy: Choose question A or B

- A.** Describe the punctuated equilibrium and innovation/diffusion theories of the policy process. For each one, explain the principal unit of analysis, the critical actors and what drives their preferences and behavior, their characterization of policy change, the nature of collective action, the part of the policy process on which most attention is focused, and whether or not governmental institutions are important. Then think about the lottery issue in North Carolina. Briefly explain how well each theory describes the lack of policy change on this issue.

- B.** When we think of the policy process, we often divide it into two principal types of actors: societal and governmental. Briefly discuss Olson's theory of group behavior. How does he understand the behavior of groups in the policy process and explain those that he believes are able to turn their preferences into policy outputs. Now think of governmental institutions. Whose preferences within government are closest to outputs according to Krehbiel (*Pivotal Politics*). Explain yourself.

III. Foundations: Choose question A or B

- A. There has been considerable debate about whether public administration is capable of renewal from within, on the one hand, or resists change and must be "reformed" from the outside, on the other. What are the major conceptual models of public administration that would support each position? How would you interpret the response of administrators in the United States with "reinventing government" in terms of the "renewal from within/reform imposed from outside" debate?
- B. Neutrality has been defined narrowly and broadly in the public administration literature. How would neutrality be defined in each of these ways and which models and/or concepts are associated with each definition? In view of this discussion, how would you assess the neutrality of (a) city managers who view themselves as more influence than elected officials in policy making and (b) administrators who share information with reporters about the misdeeds of political superiors, e.g., like Mark Felt in his deep throat role?

July 17, 2006: PhD in Public Administration Preliminary Examination

Foundations Answer 1A or 1B (cite relevant bibliography).

1A. In their interactions with elected officials, some have argued that public administrators may be either instruments or usurpers, agents or trustees, servants or masters, and tools or independent bodies. What is the significance of all these distinctions taken together, and what conceptual models support the alternative views? In contrast, what does it mean to view the political-

administrative relationship as a two-way street or a complementary relationship? What empirical evidence supports this alternative view of administrators in their relationship with elected officials?

1B. What is the difference between “value neutrality” as a quality of public administrators and “political neutrality,” and how is each reflected in behavior? What difference does it make to the nature of democratic governance which kind of neutrality is displayed by public administrators? How would the definition of neutrality affect the role of administrators in formulating public policy? Examine the conceptual models that support each approach to neutrality, and discuss the ethical implications of each approach?

Organization Theory

2. Compare and contrast Classical and Neo-Classical Organization Theory. Describe what makes up each. How are they similar? How do they differ? What are the limitations of these theories? How are they still relevant for today’s research?

Public Policy Answer 3A or 3B

3A. Describe the punctuated equilibrium and innovation/diffusion theories of the policy process. For each one, explain the principal unit of analysis, the critical actors and what drives their preferences and behavior, their characterization of policy change, the nature of collective action, the part of the policy process on which most attention is focused, and whether or not governmental institutions are important. Then think about the lottery issue in North Carolina, briefly, how does innovation/diffusion explain change on this? Again, briefly, How can punctuated equilibrium help explain policy change on the tobacco issue over the past 15 years?

3B. When we think of the policy process, we often divide it into two principal types of actors: societal and governmental. Briefly discuss Olson’s theory of group behavior. How does he understand the behavior of groups in the policy process and explain those that he believes are able to turn their preferences

into policy outputs. Now think of governmental institutions. Whose preferences within government are closest to outputs?

REVIEW GUIDE FOR PA METHODS

Date: 5/17/07:

Subject to change and updating.

Updates may be available at <http://www2.chass.ncsu.edu/garson/pa765/ch15.htm>.

Sample items are available at <http://www2.chass.ncsu.edu/garson/pa765/sampleexam.htm>

The following topics are covered in the methods test item data bank. Topics listed are general topics. Individual test items may include reference to more detailed aspects of general topics.

RESEARCH DESIGN

purpose of residual analysis

standardizing data

levels of measurement

normal curve & confidence levels

types of ordinal scales

types of validity

threats to validity

types of reliability

reliability analysis

testing for normality

testing for homoscedasticity

testing for linearity

testing for unidimensionality

data transformation

data screening

SIGNIFICANCE

assumptions of significance testing

significance v. power

type I and II errors

confidence intervals

chi-square tests

t-tests

CORRELATION/ PARTIAL CORRELATION

assumptions of correlation

attenuation

types of explanation & suppression

control variables

canonical correlation

REGRESSION

assumptions of regression

standardized and unstandardized b

R-square

significance of b and of model

WLS regression

ANOVA FAMILY

assumptions of anova

homogeneity of variance

covariates

within- and between-group designs

FACTOR ANALYSIS & RELATED

types of extraction

types of rotation

communality

eigenvalues

factor loadings

confirmatory factor analysis in SEM

cluster analysis

multi-dimensional scaling

LOG-LINEAR ANALYSIS

assumptions

sampling adequacy

likelihood ratio tests

parsimony

types of models

link function

odds and odds ratios

LOGISTIC REGRESSION

assumptions

logits

odds ratios

likelihood ratio test

significance

maximum likelihood

binomial vs. multinomial

STRUCTURAL EQUATION MODELING

assumptions

comparison with OLS regression

types of variables modeled in AMOS

model development approaches

path significance tests

modification indexes

critical ratios

assigning a metric

confirmatory factor analysis

measurement vs structural model

goodness of fit measures

checking cross-group invariance

identification of models