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REPRESENTING REGIONS:
GEOGRAPHY, CARTOGRAPHY, AND SPATIAL UNDERSTANDING.

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ABSTRACT

REPRESENTING REGIONS: GEOGRAPHY, CARTOGRAPHY, AND SPATIAL UNDERSTANDING.

by

Charles Peirce Rader

Regions are commonly used in geographic research to identify areas that possess one or more unifying characteristics. Although verbal descriptions and tabular data may present the same information, maps are one of the most effective methods for representing and communicating regional information. This research was undertaken to determine the influence that five methods of representing regions (nominal, choropleth, isarithmic, continuous tone, and dot) have on peoples' understanding (cognition) of regional patterns.

The research questions, resulting from a literature review and preliminary interviews with twelve academic geographers, asked how well each of the five different representations conveyed concepts of area extent, core and domain, transitional boundaries, internal variation, and comparison of different distributions. An experimental project was designed in which sixty-seven subjects performed a series of map reading tasks presented on a Macintosh computer using Aldus SuperCard. Response accuracies, reaction times, and confidence estimates were collected to assess the impact of map type on regional understanding.

The results showed that no one map was most suitable for portraying all types of regional information; for four of the five map use tasks, subjects performed significantly better using some map types than others. Area extent estimation was performed best using nominal maps; isarithmic maps were most suitable for identifying internal variation, locating core areas, and comparing maps; continuous tone maps best represented transitional boundaries; and choropleth maps were slightly better at showing domain areas. Significant differences in reaction times also revealed that some map types were easier to use than others. The results from this study should provide a better view of the role of cartographic representation in the understanding of regional information and provide a more certain basis for the selection of appropriate mapping methods for representing this type of information.

In memory of Ian Matley,
who taught me more than he realized

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CHAPTER I

INTRODUCTION: REGIONS AND CARTOGRAPHY

The region is a central concept in geographic research and education. "A region is any tract of the earth's surface with characteristics, either natural or of human origin, which make it different from the areas that surround it." (Haggett 1983, 262) Thematic maps are an important source of regional information, and while people often have mental maps of regions, electronic and paper maps are often the most practical way of presenting this information. A variety of map types, such as choroplethic, dasymetric, nominal, dot, continuous tone, unit grid, and isoplethic maps, are used to represent regions. The role of maps in regional portrayal is to provide an idea of the geographic location, extent, and nature (homogeneity or variability) of the region. Furthermore, maps provide a means for describing, comparing, and analyzing intraregional and interregional distributions. A major problem for the cartographer and geographer is choosing the best map type to represent a given region.

The relationship between map symbolization method and subject matter is a critical component of cartographic communication. Usually, this relationship is conceptualized as matching the data level to the appropriate symbolization method (Dobson 1975; Chang 1976; Hsu 1979). Hsu (1979, 117) further suggests that the symbolization method should reflect the essential spatial attributes of the selected phenomena. Little comparative work, however, has examined the role of symbolization method in communicating spatial attributes. Regions have underlying spatial structures that are based on the concepts, assumptions, and data that are used in their definitions. In addition, regional information is often imparted through qualitative (nominal) symbolization, and, possibly because of their deceptively simple design, these maps have received relatively little attention. Cartographers have assumed that properly chosen representations of regions reveal the underlying spatial structures of regions.

This assumption may or may not be true. Any one single map may not communicate all the concepts required to develop an adequate understanding of the spatial structure of a given region. In addition, "one map solutions" may be highly mis-informative about the essential geographic distribution being mapped (Monmonier 1991). Recent developments

in the areas of computer cartography and geographic information systems (GIS) have expanded greatly the potential for mapping regional distributions and have made it possible to generate several different representations of the same data quickly and with reasonable ease. Several map solutions to the same mapping problem are a reality. The uses of maps as tools for visualization have recently generated much interest and their potential uses as aids for problem solving at a variety of levels have been documented (Tufte 1990, DiBiase 1990, and MacEachren 1994). The problem, however, still remains of how to determine appropriate mapping methods to represent certain spatial concepts.

Definition of Region

A broad definition of the term ***region*** as 'an area on the surface of the earth that is defined by a similar characteristic or characteristics that differentiate the area from surrounding areas' is used throughout this work. This broad definition is employed since it includes simple single factor regions, those made up from the distribution of a single phenomenon, and complex multiple factor regions, those that are made up of two or more related distributions. Regions are often considered to be infinitely more complex than distributions since they often involve many subtle nuances of fact, fiction, education, perception, and understanding. The intent here is to view regions inclusively with all their many and varied conceptual connotations and spatial expressions.

Statement of Problem

The goals of this study are: 1) to determine the influence that five common cartographic methods of representing regions (nominal, choropleth, isopleth, continuous tone, and dot density) have on the spatial understanding (cognition) of regional patterns, and 2) to determine if the spatial structure of regions are adequately expressed by these different methods of representation. Within this context the research question is:

> **When a region is represented by a particular cartographic method, what influence does that method have on a map user's acquisition and understanding of regional information?**

"Acquisition" deals with the internalization of regional images and "understanding" refers to differences in spatial knowledge acquired from different representation methods.

Specifically, I will examine the correspondence between the geographer's concept of the region and the cartographer's representation of the region to determine if key regional concepts are communicated differently by different map types. I will focus on the understanding of five sets of regional concepts (location and extent, core and domain, internal structure, transitional boundaries, and map comparisons). These key concepts were distilled from the literature on the concept of the region, the literature on cartographic representations of regions, and interviews with geographers on what they try to communicate with maps of regions. Five specific research questions were developed to examine the impact that cartographic methods have on the understanding of spatial concepts.

1) Which representations facilitate the estimation of area relationships?

2) Which representations better communicate concepts of core and domain?

3) Which representations better communicate concepts of transitional boundaries?

4) Which representations better communicate concepts of variable internal structure?

5) Which representations facilitate comparison with related regional distributions?

An experimental project was developed to examine five methods of representing simple single variable regions (nominal, choropleth, isopleth, continuous tone, and dot density techniques). These are the most common mapping methods used in representing regional information and will serve to develop baseline data on the impacts of mapping methods on representing regions.

Overview of Work

The remainder of this dissertation is organized into three major chapters that deal with the development, results, and discussion of the experimental project. Chapter II is a literature review that develops more fully the concepts of the region and cartographic representation. In this chapter, the background for the experimental project is developed. Chapter III begins with the results from interviews with twelve academic geographers. The interviews were conducted to identify important regional concepts in research and education that these academics tried to facilitate through the use of maps. From these concepts, a set of map task questions are developed to determine the effect of map type on the understanding of regional information, and then these are further developed into a set

of five research hypotheses. A discussion of the development of the test maps and test instrument and a description of the test procedure and subjects conclude this chapter. Chapter IV presents a report of the results and a discussion of the five research questions. Accuracy, response times, certainty estimates, and consistency between subjects are the primary measures used to evaluate the effectiveness of the different map types in communicating regional information. The final chapter discusses the relevance of the research, potential application of the results, and directions for future research. Three appendices follow the text. Appendix A contains a description of the experimental procedure. Appendix B includes reduced black and white versions of the original color test displays for all map types, distributions, and questions. Appendix C provides a table of test data by subject. A bibliography concludes the dissertation.

The results from this project should provide a more complete understanding of the role that maps play in the understanding of regions as well as a more certain basis for selecting symbols to represent regions in cartographic design. The results should have impacts that extend into the use of maps in education and research by expanding our knowledge about how people understand regional distributions as presented by different map types and thus the potential use of different map types in presentation, visualization, and geographic analysis.

CHAPTER II

REVIEW OF LITERATURE

The mapping of regions encompasses a number of conceptual, methodological, and practical problems that range from defining 'a region' geographically to representing it cartographically. The relationship between geographic and cartographic issues centers, ultimately, on the understanding of a spatial distribution or the spatial attributes of the distribution. This relationship, which is often not made explicit in cartographic research, suggests that understanding involves not merely communicating information, but also communicating meaning, or significance (Guelke 1977, 130). A basic question is: do certain types of maps enhance a map user's understanding of certain regional concepts? Three areas of literature provide the background to the research problem. The ***concept*** of the region is drawn from geography, the ***representation*** of the region from cartography, and the issues concerning ***perception*** are drawn from psychology.

The Concept of the Region

The concept of the region has played an important role in geographic discourse in this century. It has been viewed both as the core of geographic enquiry (James 1952) and as an anachronism ill-suited for geographic enquiry because of an emphasis on uniqueness rather than the nomothetic (Kimble 1951). Definitions of the term "region" oversimplify many aspects of the nature of regions and their use in geographic education and research. Two distinct operational definitions of the region exist, further revealing the complexity within the concept. James and Martin (1981, 371-2) note the plurality in their definition of the concept:

> The *regional concept* is the term we use to refer to the mental image of an earth's surface differentiated by an exceedingly complex fabric of interwoven strands and produced by diverse but interrelated processes. This is not the relatively unsophisticated concept of the earth's surface as made up of a "mosaic of spaces", each forming a unit of area (Gibson 1978; Paterson 1974).

Both definitions have been used, often without distinction, and this has led to misunderstanding and misapplication of the term "region". The first is what geographers do and the second is what others tend to think that geographers do. The term has been applied widely to many geographic problems for different reasons and at vastly different scales, and for this reason, a concise, universally acceptable definition of the region more meaningful than 'an area on the face of the earth' does not exist. In spite of its imprecision, the region, when viewed as an area reflecting processes, remains one of the most satisfactory conceptual means for organizing, presenting, and studying many geographic phenomena.

Systematic studies of regions were first approached by Mackinder (1887; 1895) and Herbertson (1905) through examinations of processes that defined "natural regions". In the United States, genetic studies of landforms created by different processes were carried out by Fenneman (1928). Extensions of the concept of the natural region by Dryer (1915) and Roxby (1925 - 1926) incorporated people-land interactions into regional studies and were deterministic pieces based on Spencer's interpretation of Darwinism. These approaches, while often associated with the mosaic of spaces approach, had an underlying concern for process. Huntington's (1911; 1924) works on climatic impacts on culture are a particularly blatant example of deterministically defined regions. The rejection of determinism turned regional studies toward chorographic studies in the United States. James' (1929) work on the Blackstone River Valley in Massachusetts exemplifies this approach. Similar works in France were carried out on the *pays* under the direction of Vidal de la Blache and attempted to capture the 'nature' or 'character' of a region. James and Martin (1981, 372) note that chorology is wrongly viewed as an extension of the mosaic of spaces idea; more properly, chorology encompasses the interrelations of factors that make a region unique.

The idea of geography as areal differentiation, as represented by the works of Sauer (1925) and Hartshorne (1939), extended many of the concepts and approaches of chorology. Areal differentiation moved geographic work beyond the concept of the region as the 'object' of enquiry to a tool for geographic enquiry. Sauer (1925) viewed the landscape, or region, in morphological terms and focused on uniqueness of place and the co-occurrence of events and factors that made a region unique. In contrast, Hartshorne's use of areal differentiation stressed the interpretation of the variable character of the earth's surface (Hartshorne 1959, 21). The emphasis was more on the interpretation of those processes and features in an area that formed an area of variable character. Hartshorne (1959) and a more recent reinterpretation by Agnew (1990) have suggested that *areal*

variation is a more appropriate term, since the goal was to view regions in relation to one another and not as discrete units.

The rise of systematic approaches to geography and the concept of spatial separatism, space as the object of geographic enquiry, led to a decline in regional studies, and research in this area tended more toward objective approaches to region delimitation. The rigid interpretation of the term "region" and the regional approach as description based in large part on Atwood's approach to teaching geography also aided the decline. Zobler (1958) and Berry (1964;1968) applied quantitative techniques to the characterization and definition of regions. Grigg (1965;1967) approached the region as a problem of classification. Abler, Adams and Gould (1971, 182) characterized the delineation of regions as a problem of classification; they (1971, 72) also noted the importance of the region as an "operational definition". Others, however, such as Meinig (1965), working on the Mormon culture region, produced highly original and explanatory work on culture areas from the perspective of processes which made areas unique. Recent works have examined regions as the spatial expressions of agency and structure that define "social relations" (Gilbert 1988). These studies have developed a theoretically informed regional geography as exemplified by the works of Massey (1984) and Warf (1988) in which regions are expressed by underlying social functions. The focus on the underlying processes of spatial differentiation is the common thread that unites theory-based geographic approaches to the region and the regional concept.

In the last several decades, a number of working definitions for region have been adopted to better define the type of space that it identifies. Within the framework of these definitions, two general types of regions can be identified. The first type of region is the formal, or uniform, region (Haggett 1983, 262). Formal regions are conceptualized as homogeneous areas that are often defined by distinct boundaries. Traditionally, formal regions have been used for administrative functions such as taxation, collection of census, and zoning. Usually, formal regions are easily, if somewhat arbitrarily, defined. Johnston (1983, 44-45) notes that "regions are characterized by their homogeneity on prescribed characteristics, selected for their salience in highlighting areal differences...[V]irtually every region [is] in effect a generalization, complete homogeneity being very rare." Thus, the assumption of spatial structure implicit in the formal region is internal homogeneity; in other words, the defining phenomena are distributed continuously within the defined boundary, as is the case with real estate taxes, or the distinguishing feature is present (and dominant) as is often the case with cultural features, such as German barn types.

The second type of region is the functional, or nodal, region. Functional regions are conceptualized as areas related by similar function or organization, for example, newspaper market areas and urban areas (Muehrcke 1986, 248; Haggett 1983, 262). Functional regions are often associated with the concepts ***core*** and ***periphery***, and often are defined by an indefinite transitional boundary (Haggett 1983, 262). The implicit geographic assumption in the functional region is that the defining phenomena are concentrated in core areas and gradually disappear as one moves outward. Meinig's (1965) model of the Mormon culture region is based on ideas of core and peripheral relations expressed as a series of four formal regions: core - highest intensity; domain - dominant; sphere - zone of influence; and finally outliers - discrete significant local populations not contained within the sphere.

The definition of regions for specific research problems suggests that the distinction between formal and functional regions is, perhaps, best viewed as a continuum. In Meinig's example, the linkages defining the region are functional, yet the linkages are so discrete that they can be defined almost as formal regions. Usually, the problem is not so clear cut. Symanski and Newman (1973) questioned the distinction between formal and functional regions, stating that the formal region's internal sameness is the result of processes. Haggett (1983, 262) noted that regions may be defined by one (single-feature region) or more (multiple-feature region) features. In addition, the number of features used to define a region relates to how precisely a given region may be defined. Knox (1987) has also pointed out that regions have different constitutions depending on the enquiry. The issue of regional delimitation is often problematic, particularly when trying to define a region that meets both functional and administrative purposes. For example, Rader (1989) discussed the numerous problems of defining lateral boundaries for river conservation areas, since the boundary must be clearly defined for ease of administration, i.e., it must bound a formal region, and yet also include multiple features of the human and physical landscapes that are functionally linked to the river, making it a functional region as well.

Similar problems of regional definition exist in regional development. Many regional development projects utilize political divisions as the basis for analysis and administration. Areas of social inequity, often drawn along the lines of an urban-rural distinction, are identified, and development schemes are designed to redress these problems (Rondinelli 1985). However, the needs of administration often dominate the problem of urban-rural linkages. Gore (1984) has criticized this approach as being fundamentally flawed. To grossly simplify his argument, the definition of regional inequity based on social indices of

'development' often results in an ecological fallacy - that is, the inference that average conditions apply to all individuals in an area (Gore 1984, 53-4). This inference frequently masks significant inequalities. As an example, the impoverishment of people living in urban shanty towns in underdeveloped countries is masked by the higher income levels generated by other segments of the population living within the urban area. On average, it may appear that individuals in urban regions are better off than their counterparts in rural regions. In reality, the poverty of the shanty residents may be more acute since they may not have the ability to raise their own food, and they are simply included in the urban statistics because of the location of their shanty town.

A region, however defined, embodies a number of significant spatial concepts. James and Martin (1981, 373) identify a number of derivative concepts that help make further sense out of the complex interwoven fabric of the face of the earth: location, distance, direction, extent, succession over time, pattern, circulation, and accessibility. Each of these concepts lends greater explanatory power to the process of region formation. In addition, areal distributions find further spatial expression depending on whether they are continuous, discontinuous (discrete), or contingent. Continuous distributions extend over the earth's surface varying from place to place in intensity or degree; discontinuous distributions occupy discrete areas varying from place to place by kind; and contingent distributions describe variation from place to place contingent upon another measure, usually area (James and Martin 1981, 374-375). Combined, these derivative concepts refine the spatial articulation of a region. Resolution levels modify the spatial articulation of a region, since regions mapped at one scale often disappear and different ones appear each with different levels of generalization when mapped at a different scale.

In addition to the formal and functional distinction, regions have different conceptual 'morphologies' depending on their data sources. These might best be described as nominal regions and quantitative regions. Nominal regions are conceptually simple and similar in conception to the formal region. These regions describe the existence and non-existence of one or more phenomena, e.g. a newspaper market area. Quantitative regions are derived distributions that numerically describe the intensity of existence of a phenomenon, e.g. number of newspaper sales by county. This concept may be extended to a number of different phenomena, e.g. newspaper sales by education level by county. A third type of region is found between nominal and quantitative regions, and might be termed derived nominal. These are nominal regions derived from classifications of quantitative data, such as an NDVI (Normalized Difference Vegetation Index) or a principle components analysis of socio-economic data, and are used to describe areas with different characteristics.

The region has had a wide variety of conceptual bases, definitions, and uses in research, demonstrating that the regional concept is not only central but highly adaptable to many geographic problems. While regions are often imprecise because of conceptual complexity and/or oversights and problems in defining the boundary, the concept is still one of the most satisfactory means for presenting geographic information. Furthermore, the categorization of geographic information by regions is highly consistent with the schema individuals use to cognitively organize geographic information as sets and subsets of information by area (Eastman 1985). The generalizations implicit in a region simplify the amount of information to a level that can be easily comprehended, yet frequently these generalizations mask the essential nature of spatial processes. The spatial structure or nature of a region is often implied by its definition and use. While the use of regions in geographic explanation will continue to be fraught with problems, regions still provide a powerful means for describing and analyzing the spatial aspects of many phenomena, and often a map provides the means for these tasks.

Cartographic Representation of Regions

Cartographers generally employ six types of cartographic representations to portray regions: nominal maps, choropleth and dasymetric maps, unit grid maps, isarithmic maps, continuous tone maps, and dot maps. These different types of cartographic representations vary in the assumptions made about the data and the way that they graphically structure the information presented to a map reader. Some, choropleth maps for example, provide an extensively manipulated view of the data in a highly structured graphic form, and others, like the dot map, provide an almost unmanipulated view of the data in a very unstructured graphic form. Each form assumes an expression of basic spatial concepts that are readily communicated to the map reader via the symbolization. Each method will be reviewed to place the current work in the context of the cartographic literature and develop an assessment of methods for representing regions.

Nominal representations

Nominal maps show the distribution of one or more phenomena with lines to demarcate the boundaries and, usually, some type of shading (color, gray tone, or pattern) to identify areas occupied by one or more features (Figure 2.1). Unwin (1981) calls these representations choro-chromatic. The simplest are two-phase or binary maps that show the

areal coverage of one phenomenon distinguishing only the existence and non-existence of the phenomenon. Often multiple regions are presented on a map, and usually the different areas are conceptualized as mutually exclusive; for example, in land use mapping each area on the map implies only one use. However, Robinson et al. (1984, 340) note that the mutual exclusivity of these regions is often questionable, and, without a great deal of generalization, some form of interdigitation, overlapping symbols, or differential symbolization is required to show areas of overlap. The data model for this type of distribution is a raised flat plane, since only existence and nonexistence of the feature are shown.

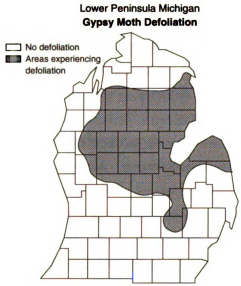

Figure 2.1 Nominal representation

Nominal classes of data are often derived from quantitative data. For example, on a map of vegetation stress produced from remotely sensed data, an index that relates the greenness of the spectral response of the vegetation to plant health is often used to identify areas of healthy and stressed vegetation. Once mapped, the two areas will generally be represented as areas of healthy and unhealthy plants with little or no reference to the quantitative source of the classification. Textbooks are replete with examples of this type of map, and it is perhaps one of the most used methods for presenting regional information. From a geographic perspective, these maps may promote ecologically fallacious ideas

because of their representation of a region with a homogeneous tone or color, thereby implying existence everywhere within the mapped region.

The nature of the boundaries for nominal regions, particularly at small scale, is more often than not transitional, as in the transition between climate types. Typically this transitional boundary is represented by a hard line and has the potential to mislead map readers. Most of the research on these types of maps has examined the use of color in differentiating areas on the map (Nunez de la Cuevas 1967) and associative properties of color (van der Weiden and Ormeling 1972); however, no works have examined the quality of the information derived from these representations.

Choropleth and dasymetric representations

Choropleth and dasymetric maps are closely related and are used for the representation of regions derived from quantitative data (Figure 2.2). Choroplethic and dasymetric map forms are essentially the same, differing only in aggregation unit. Dasymetric forms possess better fidelity to the actual distribution since they are based on the known (or interpreted) limits and probabilities of the distribution rather than on artificial (and usually larger) aggregation units as are choroplethic forms. Symbolization for choropleth maps consists of areal tints, and sometimes patterns, that mimic value progressions. Sometimes hues are used to show different subgroups of the data in double-ended schemes. The goal is to provide an idea of change of magnitude, more ink meaning "more" and less ink "less".

The data model for choroplethic and dasymetric representations is a stepped surface with the height of the areal surface representing its value. These representation forms are employed with ordinal and higher levels of data classification. Classification is often problematic for choropleth maps since changes in the classification scheme and number of classes can radically alter the patterns on the map. Most research has concentrated on choroplethic forms and has examined the role of complexity (Monmonier 1974; Lavin 1979; MacEachren 1982a, 1982b, and 1985), number of class intervals (Olson 1972; Muller 1975), and perceptibility and discriminability of shading symbols (Williams 1958; Jenks and Knos 1961; Kimerling 1985). Recently, classless choropleth maps have been investigated by Peterson (1979), Muller (1979), and Carstensen (1982), with the findings that class intervals may not be as much of an aid to the perception of map patterns as once thought. Frequently, these classless maps are referred to as continuous tone maps; however, this implies continuous tone between units of aggregation more like a smooth surface, rather than the stepped surface suggested by choroplethic forms.

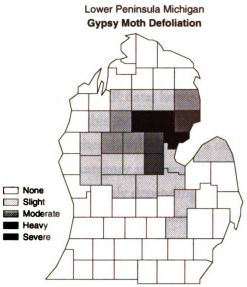

Figure 2.2 Choropleth representation

The ease of construction and the generalization of distributions are the two main advantages of these techniques. Both forms, however, rely on the implicit cartographic assumption that the distribution is reasonably homogeneous within the defined boundaries. Regions are formed by the visual grouping of similar values on the map. Youngmann (1972, 12) noted:

> Simple and compound choropleth maps utilized by geographers are an extension of the concept of regions. In light of traditional geographic methodology, choropleth maps are representations of the areal differentiation of the face of the earth. In other words, classification of observations as they appear symbolized on a map may be interpreted by the geographer as regions.

In addition to the fact that choroplethic representations assume that each area is homogeneous, these maps are also prone to promoting generalized views of the world that may not be warranted. The basic fact is that these types of representation mask all internal variation within the area (Robinson et al. 1984, 365). The dasymetric forms ameliorate some of the masking effect; however, their construction requires more data and greater knowledge of the phenomenon.

Unit grid representations

Unit grid maps are a variation on the choropleth form; a given area is divided into grid cells of equal area (Figure 2.3). In addition, unit grid representations form the basis for grid-based geographic information systems (GIS) and related analytical routines. Maps of this type are usually derived from the classification of satellite imagery, such as Landsat Thematic Mapper (TM), or NOAA AVHRR data; however, some countries, notably Japan, England and Sweden, have used this technique to map census data. Each grid cell is represented by a value that indicates either membership in a category, e.g., farmland, urban land, or rangeland, or intensity of one category at a location, e.g., number of persons or temperature. Grid cell resolutions vary greatly depending on data sources. Resolutions ranging from less than a meter on a side for low altitude airborne sensors to many kilometers on a side for NOAA's weather satellites are common. Symbolization for unit grid representations may include hue, pattern, and value (tone) depending on the level of generalization.

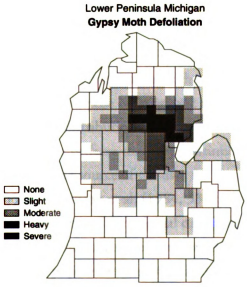

Figure 2.3 Unit grid representation

Unit grid representations conform to both stepped and planar data models depending on the source of their data and the level of processing to which the data has been subjected. In a raw plot of values, the model is stepped, and in the derived nominal case the data

model is planar. Because of the high data density, maps from these sources usually require a great deal of classification. A typical land use map derived from a satellite image results from the classification of spectral reflectances into land use classes, thereby creating a derived nominal representation of the spectral reflectances. Maps of this sort would normally be impractical without the use of a computer to process and display the data.

Little cartographic research has investigated unit grid representations, although a number of studies on choropleth maps have used unit grids to control for size and shape interactions (Olson 1972 and Lavin 1979). While similar to other choroplethic forms, the small size of the areal units over which the data are collected insure a better representation of conditions at a particular location. Tufte (1990) has observed that these types of maps operate on two levels. The user may develop a general 'region' from similar hues or combinations of hues, but may also look at greater detail within these larger user-defined regions. In contrast, other choroplethic forms usually only allow for the development of more general regional patterns. With increases in sources of data and the ability to manipulate them with the computer, this mode of representation will continue to increase in importance.

Isarithmic representations

Isarithmic or isoline maps display a distribution with a set of lines that join points of equal value (Figure 2.4). The main purpose of isarithmic mapping is to provide a general impression of variations in a spatial distribution (Muehrcke 1986, 108). These maps attempt to represent regional data as surfaces that vary continuously from one place to another. However, depending on the source of the data for the maps, these representations may or may not be continuous. Robinson et al. (1984, 335) identify two forms of isarithmic maps that differ in "the form of the original data": isometric maps are based on measurements from points on a continuous surface (e.g. weather maps), and isoplethic maps are based on areal data (e.g. population density maps). The difference between the two forms is critical since different assumptions about the distributions are made, yet the two forms are represented identically. The data model for these representations can be either a continuous surface or a stepped surface if one thinks of the spaces between the isolines as flat. These forms apply to the representation of statistical surfaces and landforms at ordinal or higher levels of measurement.

The most common form of symbolization for isarithmic maps is a series of lines that describe equal values on a surface. A map reader must interpret from these lines both the

form of the underlying data (isometric or isoplethic) and the resulting surface. The use of layer tints between the isolines is often used to improve the perception of the surface form of the distribution (Figure 2.4). Layer tinting is commonly used on weather maps (e.g. USA Today's temperature map), and hypsometric tints are often used in the representation of land elevations. It is sometimes assumed that map readers can only determine a range of elevation values for a given point from these representations and nothing of the within-range variation (Campbell 1984, 332), although all the information is present to allow interpolation of an elevation value.

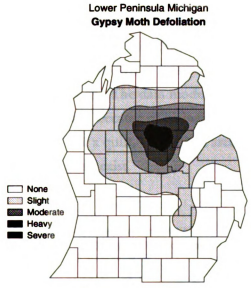

Figure 2.4 Isarithmic representation

Work on these forms has closely paralleled studies performed with choropleth maps. The ability of subjects to discern regions on these maps was studied by Griffin and Lock (1976). Similarly, the number of class intervals was further addressed by Phillips, DeLucia, and Skelton (1975). However, unlike choropleth maps, layer shadings on isometric maps, and frequently on isoplethic maps, always proceed in an orderly arrangement from low to high or vice-versa, placing less demand on the map reader to be able to discern fine differences in the shading. A number of studies have examined the use of shading on isarithmic maps to determine the best sequences for portraying magnitude in both single- and double-ended schemes (Cuff 1972; 1973). Patton and Crawford (1977) investigated

problems of color associations with conventional hypsometric tints and found that hue, particularly green, produced an unintended message about the nature of the land cover in an area. Problems of both symbolization and nature of the distribution tend to make this a difficult type of representation for some map users.

Continuous tone representations

More recently, with the versatility that computer assisted design has brought to map making, continuous tone maps have become a viable method for representing regional information (Figure 2.5). Continuous tone techniques apply to qualitative and quantitative representations, although nominal cases must be derived from quantitative data that represent changes in intensity of the distribution. These representations are usually developed from a regular grid of known or interpolated values and shading intensity values and hues are assigned on this basis. The data model for continuous tone maps is a smooth surface. Even the nominal case, because of its indication of intensity, might best be considered a smooth surface, much like a quilt, with raised areas representing where phenomena exist and valleys where none exist.

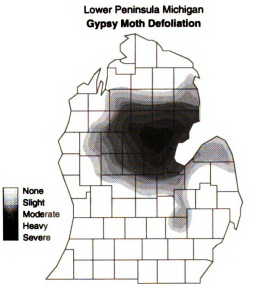

Figure 2.5 Continuous-tone representation

Symbolization for continuous tone maps relies on hue and value progressions to indicate change in both class and intensity. Changes of hue indicate changes of class, mixtures of hue indicate transition, and changes in value indicate changes in intensity. All or one of these dimensions may be employed on continuous tone maps making it a versatile method for representing continuous distributions. The method appears to have potential in multi-factor mapping where relationships of existence, nonexistence, transitional boundaries, and overlapping areas need to be represented. Continuous tone techniques provide a potential solution to the problem of transitional boundaries. Methods for producing these types of maps have been investigated by Groop and Smith (1982), Lavin (1986), and Kumler and Groop (1990).

Lavin (1986) applied dot-density shading techniques to produce continuous representations of climatic data and he suggested that better thematic interpretations of intensities and transitions were possible using this method when compared to isoline representations. Kumler and Groop (1990) applied a continuous tone technique to the representation of smooth statistical surfaces. Results indicated that subjects performed significantly better in locating surface extrema, relative and exact values at specific points, and determining slope between two points with the continuous tone maps than with block diagrams or traditional isarithmic maps (Kumler 1988, 53). A similar approach to the representation of regional boundaries as exemplified by climate regions was utilized by Groop and Harman (1988). They suggested that the use of transitional boundaries with continuously variable distributions, such as climate types, is justified since it provides a "cartographic representation that is visually commensurate with the geographic phenomenon that is being illustrated." (Groop and Harman 1988, 68)

No experimental work has verified the nature of the relationship between continuous tone representations and the geographic understanding of regions. Continuous tone maps have the potential to be applied at nominal and higher levels of representation since the shading can be used to indicate transitional boundaries. In addition, continuous tone maps have the ability to indicate internal variation within the distribution.

Dot representations

Dot maps attempt to show both the quantity and the distribution of a phenomenon over space by placing dots representing one or more individuals of the population at the location where they reside (Figure 2.6). "The dot map can show the details of the locational character of a distribution more clearly than any other type of map. Variations

in pattern or arrangement, such as linearity and clustering, become apparent. The dot map provides an easily understood visual impression of relative density..." (Robinson, et al. 1984, 300). Dahlberg (1967) suggested that the dot map has a number of conceptual forms, including that of a statistical diagram with various surface configurations from smooth to stepped. Muehrcke (1986, 110) notes that two forms of dot maps exist: point symbol maps that show the location of each and every member of a population by one point (which also may be classified as a location map), and dot maps that show distribution with at least several members of a population represented by one point.

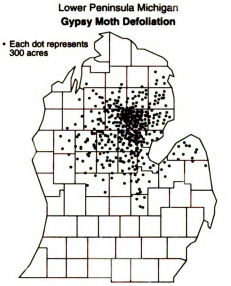

Figure 2.6 Dot representation

The symbolization on dot maps is relatively straightforward and consists of a set of tiny circular or other shaped geometric figures. The problem often is placing the right number of dots in the right amount of space to achieve the desired impact of changing density from one place to another. Usually, variations in the visual quality of the symbols are not used. Jenks (1953) suggested 'pointillism' could be used as a cartographic technique to show multiple distributions on one map and described the mapping of agricultural regions for the U.S. with this technique. Using this method, several different color dots are used to represent different characteristics of one phenomenon or different phenomena. The mix of

both density and hue combinations portrays both changes in composition and intensity of the mapped features.

Research on dot representations has, for the most part, concentrated on the improvement of pattern perception. Dahlberg (1967) conducted the most extensive discussion of the dot map and suggested a number of means for improving it. Olson (1975a) determined that adding additional dots in high density areas aided in the perception of density in these areas. Rogers and Groop (1981) further examined Jenks' idea of multicolor dot maps and determined that subjects were able to perceive regions with the multicolor map as easily as with single monochrome maps. The spatial concepts that dot maps are able to portray are: extent, density, transition, location and variability. Overall, the dot map is perceived to be an effective form for the representation of spatial information concerning regions covering many levels of data measurement.

Perception of Form

All map reading starts with some perception of the map and the spatial patterns of the data distribution. These perceptions largely fall under the realm of pattern recognition, and a brief review of the psychological findings regarding pattern recognition will help clarify the research hypotheses for this experiment. Gestalt psychologists postulate that figures, or in this case patterns, are taken in as a whole and are subject to "rules of closure and continuation". Good forms conform, and poor forms do not conform to rules of closure. Zusne (1970, 150) suggests that while the correspondence between stimulus and internal representation is coherent, there is little fidelity between the two; topological relationships (relative positions) are usually preserved in the internal representation while the topographic relationships (exact positions) are often altered. Often, the arrangement of the stimulus is more important to identification than is the precise location of the object(s). Recently, work has turned to object recognition in studying how the representation of an object leads to recognition. Two theories of recognition have been proposed. Biederman (1987) has proposed that perception is largely a problem of recognition by component parts (RBC). Serial edge tracing, proposed by Ullman (1984), suggests that the contour defining the outer edge of an object is traced from start to finish to provide object definition.

RBC proposes that the mental image of an object is broken down into simple geometric primitives called geons, similar to phenomes in language. Geons consist of elements such as cylinders, blocks, and cones. Similar to phenomes, the set of geometric

primitives is actually quite limited, perhaps fewer than 36 (Biederman 1987, 121). The parsing into component parts is performed at regions of concavity (Biederman 1987, 117). Non-accidental properties such as vertices and symmetry provide constraints that allow for the identification of the components. Biederman (1987, 133) suggests that the breaking down of an object into component parts occurs in primal access, the earliest stage of image acquisition, and it relies on the edge-based recognition of a few simple components. A number of the parts of RBC are consistent with theories of feature detection for typography suggested by Selfridge (1959) and Gibson (1965).

The experimental evidence in favor of RBC makes the model somewhat more robust than serial edge tracing. Biederman, Ju, and Clapper (1985) determined that recognition accuracy and reaction times were not affected by the complexity of the object, and in some cases the more complex objects had shorter reaction times. RBC postulates that the critical units for recognition are edge-based (Biederman 1987, 131). Serial contour tracing, as proposed by Ullman (1983), suggests that more complex objects should require an increase in recognition time because of increased edge contour length. Biederman and Ju (1986) compared color photographs to line drawings of the objects; reaction times were equivalent despite the fact that some of the objects, such as a banana, had a diagnostic color distinction. Biederman (1987, 133) does acknowledge that under conditions where edge extraction is difficult, differences in color, texture, and luminance might readily facilitate object recognition. Further work by Biederman and Blickle (1985) on the perception of degraded objects suggested that objects that have been degraded by deletion of their contour in critical areas of concavity impede or make recognition impossible (unrecoverable) under conditions where contextual inference is not possible (Biederman 1987). Recognition by components therefore suggests that recognition is edge-based and that other factors such as surface characteristics are of secondary importance in the identification of objects.

The perception of indefinite boundaries, as one would find on a continuous tone map, is not well understood. However, the psychological evidence suggests that this may not be a problem for map readers. For regions with simple boundaries, the lack of a definite edge may not be much of a factor; however, for regions with complex boundaries, perception may be more difficult. Therefore, it is likely that regions lacking a well-defined edge, especially complex regions, will impede the formation of a 'mental image' of the region. For work with actual maps, this may be less of a concern. Three of the map representation types discussed in the preceding section (nominal, choropleth, and shaded isoline) possess

definite edges, and three of the representations, depending on the nature of the distribution, lack definite edges (unit grid, continuous tone, and dot).

Synthesis: The Regional Concept and Cartography

The relationship between the regional concept and regional representation lies ultimately in the understanding of a spatial distribution that they engender. In a sense, concept and region are different approaches to a similar problem. Geographers have been concerned with the development of regions that express certain ideas about processes that make a place stand out from its surroundings. In addition, they have also been concerned with internal variations within these areas. The goal has been the expression of geographically meaningful patterns. To a large extent, maps have been used to aid in the identification and explanation of these patterns. Cartographers have obliged and essentially produced data-driven graphic representations of these areas based on an idealized form of the data (discrete or continuous), the appropriate enumeration units, and the appropriate cartographic technique. However, too little concern has been placed on representing certain spatial aspects of the region.

Regions are often used in geography to guide our analyses and organize our ideas about space. Little has been written on what concepts we actually try to communicate with regional information. While our understanding of the region is largely conceptual, we associate different ideas with different types of regions. The relationships are, in part, due to the spatial arrangement of the phenomena being represented and, in part, due to the nature of our geographic data on the phenomena, i.e. whether we know the location of every member of the population. Key concepts that geographers attempt to communicate about the region are: location, homogeneity, variability, definite boundaries, transitional boundaries, relative and absolute area, and, more often than not, the relationship to other distributions. Implicit in our conceptualizations and representations of regions is the idea that various expressions of spatial structure exist. Regions provide an expression of theories about what a place is like.

Important geographic concepts in the representation of regions center largely on how well ideas concerning the nature of the spatial distribution are expressed. The concepts of internal variability and transitional boundaries are two areas that have seemingly been neglected in the geographic and cartographic literature. To be sure, most geographers realize that most boundaries in geographic space are transitional. The problem becomes more acute in transmitting ideas about regions and their limitations to others, who may or

may not understand the transitional nature of boundaries. The precision with which we can map areas utilizing global positioning systems, remotely sensed data, and geographic information systems far surpasses our conceptual abilities to define different areas on the face of the earth that form meaningful regions. Traditional cartographic representations of these areas, with sharp boundary lines and homogeneous flat tones, are often not warranted by the data since they do not adequately express ideas of variability and transition. The world cannot be carved into a jigsaw puzzle of unit areas, yet our representations and conceptualizations of regions continue to foster this view. If geographic understanding is our goal, then our verbal and graphic conceptualizations of the problem need to be more explicit. In addition to information about the location and extent of these areas, are we trying to communicate an understanding of spatial aspects such as transition, abruptness, continuity, and discontinuity?

The use of different cartographic representations is governed by the purpose of the map. Although the possibility exists to represent almost any data set with any of the above symbolization types, the intended message of the map must be considered and the symbol type must be selected in accordance with this message (Hsu 1979). The question as posed by Jenks (1970) is: what concepts about the distribution are important and should be made apparent through the symbolization? For example, the use of nominal techniques to represent climate zones is inappropriate, since variability in weather conditions make certain areas transitional between zones (Groop and Harman 1988); however, on a large scale land use map such techniques are appropriate, since distinct boundaries between woodlots and fields can be identified. Implicit within these forms of mapping spatial distributions are many assumptions about the spatial nature of the phenomena. Therefore, the type of symbol employed should be capable of communicating this information to the map user.

Traditionally, the problem of map symbol selection has been data driven and conceived as matching the right measurement level, idealized 'surface form', class of feature, and cartographic representation. Within cartography, there are suggested conventions for the use of particular types of maps for the representation of particular phenomena. The problem of understanding, therefore, is essentially a function of symbol-referent relationships. Hsu (1979), Chang (1976), and Dobson (1975) addressed the conceptual issues of symbol and subject matter relationships in cartography. Dobson tested the relationship empirically through a map title and map matching exercise. He found that map readers were able to match the conventionally recommended symbol type with the subject of the map; trained readers performed better than untrained readers (1975, 64).

Hsu and Chang's works were conceptual and stressed the relationship between data classes and symbolization. Their reviews emphasized the correspondence of the classes of cartographic features (points, lines, areas, and volumes) and levels of measurement (nominal, ordinal, and interval/ratio) to symbol type. While symbols are conceptually related to their referents and this has guided symbol selection, no work has examined the impact of particular symbols on geographic understanding. Little empirical evidence is available to suggest how successfully these types of maps meet the goals of communicating spatial concepts.

Jenks (1973) hypothesized that two classes of information are communicated by a thematic map: one is tabular information and the other is integrative information. The first can be extracted from a map fact-by-fact to determine the number of a particular phenomena in an area. The second transcends the simple extraction of information "wherein symbols are merged into fields to form patterns or regions" (Jenks 1973, 27). However, the critical question asked by Jenks (1973, 27) is: on viewing a map, do we all end up with similar or different images? Working with dot maps, Jenks determined that "there is a great diversity between patterns and boundaries reported by" different individuals (Jenks 1973, 28). Peterson (1979, 32) noted: "A major purpose of thematic mapping, however, is to convey a pattern for the distribution. Pattern arises from the graphic symbolization which promotes a type of generalization over space." Peterson's (1985) work on image quality suggests that the role of map pattern in the formation of mental images is different with different graduated symbol maps. Eastman (1985) demonstrated that the definition of spatial chunks (regions) is strongly influenced by the graphic organization of the map. Therefore, one might expect that different representations, even of the same distribution, will yield different graphic organizations, and ultimately, different outcomes in map reading exercises. Once the map image is internalized, the question concerns the meaning of the map symbol. Do diverse perceptions yield fundamentally different understandings of the regional information portrayed by a map?

The cartographic representation of regions is essentially a problem of determining which symbolization method is best for representing the information and communicating an understanding of a geographic reality. Over the past three decades, a psychophysical approach to cartographic design has emphasized symbol design. Guelke (1977) has criticized this approach based on the fact that it emphasizes perception of 'information' and ignores understanding. More recently, cartographers have approached the problem from a cognitive perspective and have stressed the impact of the map on the individual's

understanding of cartographic information. Gilmartin (1981, 9) suggested that both perspectives are critical and that "cartographers ought to understand not only how people react to graphic characteristics of the map symbols, but also how symbols and the map as a whole acquire meaning." The former can be thought of as the surface structure of the map, and the latter the deep structure (Head 1984). As a result of the work conducted during the past decades, we have a good understanding of the surface structure of the map, but little understanding of the deep structure of the map. MacEachren (1991, 5) has identified the question: 'do particular symbolization methods actually communicate the particular spatial characteristics that we as cartographers associate with them?'

Changing conceptions of regions have also challenged our cartographic abilities. Changes in technology, representation, and conception have stimulated the need for continued development and study of cartographic techniques. Lewis (1991, 621) stated the importance of this problem from a geographer's view:

> It is clearly no longer tenable to conceive of the human community as divisible into simple social units, singular jigsaw pieces completely filling geographical space....In this context, they [geographers] may begin by acknowledging that human relatedness, an inescapably spatial phenomenon, must be apprehended through maps, however contingent and imperfect they might be....In responding to the challenge, geographers should seek new cartographic models. We need map making techniques that can do justice to the enormous complexity of this topic; returning to cartography must not entail the depiction of one-dimensional-jigsaw-like patterns. Gradients must be distinguished from sharp boundaries, and boundaries transcending lateral ties must be recognized. Equally important, the mapping of relatedness must depict hierarchical series, paying particularly close attention to the problematic relationship of groups defined at different scales.

Little is known of the role that maps play in the presentation and subsequent understanding of regional information. The problem is, therefore, threefold: 1) what is the basic nature of the region, 2) what are the perceptual visual aspects of the cartographic methods we use to represent regions, and 3) what is the impact of these representations on a map user, and do the representations adequately communicate concepts related to the nature of the region. The key is to determine whether or not different cartographic representations of regions develop differential understandings of the spatial structure of regions. This problem focuses on whether or not certain representations lead to a greater consistency in mental images and whether or not certain representations promote a better understanding of the internal spatial structure of the region (e.g., homogeneity, heterogeneity, transitional boundaries, etc.).

CHAPTER III

RESEARCH DESIGN AND METHODS

The experiment in this project was designed to collect information on differences in subjects' understandings of the nature of map distributions and their ability to perform 'typical' map using tasks across five different map types. In the first part of this chapter, the logic for the test design and the research hypotheses are developed. The results from a series of interviews with professional map users and a discussion of the map use tasks provide the background for the specific research hypotheses that are used to determine the effectiveness of different map types in representing regional information. The design of the experiment is described in the last part of the chapter and includes a discussion of the test maps, question sets, procedure, and subjects.

Interviews

Twelve academic geographers[1] were interviewed to collect fundamental information on the use of regions and maps of regions in the classroom and professional work. The geographers interviewed broadly represent the diversity of the discipline and include both human and physical geographers. The interviews were informal and helped to identify a diversity of approaches to the use of both maps and regions. These, in turn, helped to determine what to ask the map users in this project and to establish more cohesively the relationships between the geographic concepts and the maps used to represent these concepts.

The question posed to the geographers was, "for what do you use maps of regions in your teaching and research, and what do you expect people to learn from them?" This question ultimately yielded two responses; the first was generic to map use and the second was specific to the use of regions. The responses to this question were aggregated to determine the types of tasks one expects a map user in an academic setting to perform in

[1] Sharmistha Bagchi-Sen, William Blewett, Henry Castner, David Campbell, Peter Galvin, Richard Groop, Ian Matley, Mark Pires, Randall Schaetzl, Robert Thomas, Julie Winkler, and Harold Winters were interviewed.

obtaining information from cartographic representations of regions (Table 3.1). Six categories of map use task and information were identified: presentation, location, extent, pattern, covariation, and analysis. Within each of these categories there were a number of specific responses. Distribution of knowledge, location (where), ideas of membership (inclusion or exclusion), extent (relative area), pattern (continuous or discontinuous), and relationship to other distributions (spatial interactions and associations) were mentioned by almost all respondents. The basic 'four Ws of geography' (what, where, when, and why) were covered in the explanations of use of regions.

Table 3.1 Summary of interviews defining uses of maps in presenting regional information

General use categories	Specific uses of maps of regions
Presentation	Distribution of (spatial) information
	Interest people in a geographic problem
Location	Existence of phenomenon (what)
	Geographic area (where)
Extent	Spatial scale and 'temporal scale' (when)
	Absolute area and relative area
Pattern	Variation and intensity
	Continuity and discontinuity (homogeneity and heterogeneity)
	Abrupt changes and transition (transitional boundaries)
	Core and domain (periphery)
Covariation	Comparison to other patterns (similarity and dissimilarity) (why)
	Relationship to other patterns (proximity and associations)
Analysis	Exploration and visualization of relationships (why)
	Spatial interactions and explanation of "process"
	Hypothesis generation (models)

Uses falling under the categories of presentation, location, and extent were relatively straightforward since these correspond mainly to the mechanics of presenting information

and generating interest in the topic. There is a certain need to define the relative geographic coordinates and the size of the subject matter being examined. In other words, is it a question of local, national, continental, or worldwide proportions and where does it occur? Maps were used as backgrounds for discussions, to reinforce the basic geography, and to provide a 'mental image' of the area. Map presentations were often supplemented with verbal descriptions of the areas and the relevant dimensions and locations.

Views on the use of regions diverged on pattern, although all the concepts expressed appeared to center on the depiction of internal variation of regions, whether expressed as different densities, continuity and discontinuity, or ideas of core and domain (periphery). The idea of transitional boundaries appeared in almost all discussions, since it is the norm for geographic distributions. Winters (1991) eloquently described the problem: 'It is hard to find meaningful lines on a map. In physical geography we need to treat every line as a transition, and people must be continually sensitized to this. Where does one soil end and the other begin?' The importance of transition has further ramifications since it expresses the uncertainty of the location of many spatial phenomena. One geographer questioned the efficacy of geographic information systems on this point, by asking: 'Are we giving people the wrong impression that we know exactly where everything is?' The impact that apparently accurate presentations have on the communication of geographic information is evidently at issue.

The covariation of spatial patterns was a critical part of all discussions on the uses of regions and maps. Association with and similarities to other patterns were important issues in the use of regions for this purpose. In teaching models, map comparisons were typically used to spark interest in why certain patterns were similar or very different. In addition, the proximity of certain patterns was perceived to be important, since, although the patterns between maps may not overlap, they may correspond in different ways, for example the way that the eastern coastline of South America nests with the western coastline of Africa used in illustrations of plate tectonics. The use of single-factor regions to develop multi-factor regions is another example of the type of activity that map comparison encompassed. These activities, along with pattern, define most of the basic functions involved in understanding a spatial distribution and are perhaps the tasks most affected by both verbal and cartographic expressions of regions.

The final category involved the extension of the previous concepts to analysis. The initial phases of explanation in the interviews usually led to a more thorough examination of the spatial processes used to define a region. Data exploration, expressions of spatial interaction, and expressions of hypotheses about space were characteristic of responses in

this category. The 'why question' of geography came to the forefront, and both conceptions and maps of regions focused on the explanation of processes occurring over space. These were used in both the generation of initial ideas (pre-hypotheses) and the confirmation and further development of existing hypotheses. In many ways maps were considered to be models of hypotheses. This last category also relied more on other sources of information.

A difference in the level of map use was noted between older and younger geographers, and it may well be the result of differences in training. Older geographers had a reverence for maps that points toward the primacy that training in map use once had in the discipline, and they used maps more intensely in both their research and their teaching. Emphasis was on the integration of knowledge from maps and the use of multiple maps in understanding the area being studied. In addition, the term "region" elicited responses from older geographers that emphasized it as the cohesive character of an area, and in most cases the 'region' was a multi-factor region. In contrast, the systematic nature of the training received by many younger geographers de-emphasized the role of the map. In addition, many younger geographers treated the region as a generic area on the face of the earth that was used mainly to emphasize the location of the phenomenon under discussion, in most cases a single-factor region. One senior member of the discipline commented that many younger geographers do not look at maps and they do not know the "regional geography" of the area they are studying. The responses of the younger geographers tended to corroborate this statement. One indicated use of maps mainly to show the location and extent of an area and where it was in relationship to other areas. This person expected people to know where the core areas were. Another indicated very little use of maps in teaching and only in research to identify the location of the study area and measurements within the study area. To be sure, some of these age-related views result from different stages in course development and research programs.

The main difference between the use of maps of regions in research and teaching was the specificity of preparation and discussion. Teaching invited a more informal approach to the use of maps. General patterns and knowledge of the distributions were stressed over specifics. Much of the difference was attributed to the geographic sophistication of the audience and the specificity of region definitions required for research. The same tasks were mentioned for research; however, the emphasis was clearly on the specifics of the relationships to other distributions. Illustrations for articles were primarily used for location of study area or samples within the study area, with little or no reference to the

patterns on the map. The differences could be characterized as a teaching orientation more towards synthesis and as a research orientation more towards analysis.

In summarizing the interview data, the critical question raised is this: how well do our current forms of representing regions meet these use requirements and should, and can we as geographers be more demanding of our representational forms in expressing our ideas about regions?

Determination of Map Use Tasks

A set of test questions was developed to address tasks involving estimation of relative extent and the understanding of core and domain, boundary forms, intraregional variation, and map comparisons. The relative area estimation task collected information on the perception of the size of an area in relation to its overall geographic setting, as, for example, the area of national forests in Michigan. Mapped expressions of core and domain, transitional boundaries, and internal structure were designed to determine if different cartographic symbols carry implicit codes for the nature of spatial distributions. Questions concerning these map use tasks address the overall issue of whether or not certain representation methods, such as those used on nominal maps, encourage the development of ecologically fallacious impressions of strict internal homogeneity. Map comparison questions deal with the correlation, or covariation, of different distributions and attempt to arrive at information on the "why" which is so important in the analysis of regional distributions and spatial interactions.

The goal of the test design was to develop tasks that represent typical map use problems rather than the artificial tasks utilized in numerous cartographic studies. McCleary (1975) and Board (1978) noted that map use tasks are an important determinant of map user performance. In addition, meaningful stimulus (Reicher 1969) and tasks (Eagle and Leiter 1964) have been demonstrated to be important factors in experimental results in psychology. The main problem, as Guelke (1977) has suggested, is to place the test information in a meaningful map context. Since we are primarily concerned with how the map functions in promoting geographic understanding, the use of realistic map use tasks is highly desirable. Response time and accuracy are the primary measures used to judge subject performance for the different methods of representing data on maps used in the test. Certainty ratings (very certain, somewhat certain, somewhat uncertain, very uncertain) were also collected for each question. The data help to answer three basic questions regarding overall performance: 1) do some representations produce significantly

faster or more accurate responses, 2) are some classes of map tasks more difficult for subjects, and 3) do responses for different tasks vary with representation types, in other words, do different map representation types impart a qualitatively different understanding of the nature of the same region?

Generally, more difficult tasks should yield longer response times, lower accuracy, and lower certainty estimates among subjects. Therefore, the results should reveal any differences that exist between map types and should identify empirically more difficult and less difficult map use tasks. Accuracy is also used as a measure of the stability of the representations. Muehrcke (1990, 11-12) has suggested "stability" as one measure of the cartographic accuracy of a representation, since "[i]t would be undesirable if slight alterations in data inputs or *mapping parameters* (italics added) would significantly alter the view of the environment gotten from a map." The choice of symbol type is a significant mapping parameter under the control of the cartographer. Therefore, it is important that we understand how these issues are involved as we make our choices concerning cartographic representation.

Five research hypotheses are proposed to assess the impact of map representation method on the spatial understanding of regions. Since the nature of the boundary lines for regions appears to be important in the internalization of representations, the hypotheses are designed around this factor as a predictor of outcomes for the different tasks. The five research hypotheses presented below are consistent with both cartographers' conceptions of representation methods and geographers' regional concepts and expressions of regional distributions.

Research Questions and Hypotheses

The general research question that is used to examine the impact that different cartographic representations have on map users' acquisition and understanding of regional information is:

Do different methods of representing regional information produce differential performances and understandings of the nature of regional distributions among map readers performing "typical" map use tasks, such as estimation of extent, interpretation of intensity, core and domain relationships, transitional boundaries, and ability to perform map comparisons?

In pursuing this question, the impacts that five symbolization methods for representing regions have on the map reader's acquisition of regional information are examined. Response accuracy, response time (latency), certainty ratings, and interpretation are examined in order to provide information as to whether any of the representations are better suited to providing key regional concepts than are others. Five specific research questions are addressed:

Question 1: Which representations, if any, promote consistent estimation of relative area (extent) of a region?

Hypothesis 1: Subjects will perform better on estimation of relative extent using representations bounded by definite edges than using representations without definite edges.

Question 2: Which representations, if any, consistently communicate concepts of core and domain?

Hypothesis 2: Subjects will perform better on core and domain assessments using representations with internal graphic variability than on those represented by a flat tone.

Question 3: Which representations, if any, communicate concepts of transitional boundaries to map readers more consistently than others?

Hypothesis 3: Subjects will perform better on transitional boundary assessments using representations with transitional boundaries, e.g. continuous tone and dot representations.

Question 4: Do different representations consistently communicate concepts of variable internal structure of regional distributions?

Hypothesis 4: Subjects will consistently interpret nominal representations as homogeneous areas and other representations as having variable distributions.

Question 5: Which representations, if any, facilitate map comparison tasks with other related regional distributions?

Hypothesis 5: Subjects will exhibit better performance on map comparisons with representations bounded by definite edges than with representations without definite edges.

For the purposes of this experiment, better is defined as more accurate responses, more consistent responses, and faster response times; it is important to note that response times and accuracy should both be examined since it is possible that higher accuracy may be achieved with slower response times. The associated null hypotheses for each of the research hypotheses are that there is no difference between map types in representing these different aspects of regional information.

Experimental Design

Subjects performed typical map use tasks and answered questions designed to test their understanding of the symbolization used for representing regional distributions. The testing sequence required the subjects to perform the tasks while working with the maps. A brief description of the test maps, the specific test questions, test sets, test procedure, and subjects follows.

Test maps

A set of 20 test maps was constructed for this experiment from four different geographic distributions. Five practice maps were created from a fifth distribution. An additional 44 degraded versions of the test and practice maps were created with varying correlations to the original maps for use in the map comparison tasks. The four different distributions were mapped using each of the five different cartographic representation methods under investigation. The distributions used for this experiment were: gypsy moth defoliation by county in the lower peninsula of Michigan, agricultural production by county in Georgia, banana production by commune in Rwanda, and adherents of Islam by country in Africa. The practice set was developed from a random hypothetical distribution by country for South America. The distributions represent a variety of phenomena at different scales. Locations and/or distributions to which North Americans have likely had little exposure were chosen, so that prior knowledge should not impact the results. Titles and legends were included on the maps to make them realistic and allow the subjects to attach "meaningful" concepts, e.g., defoliation and religion, to the maps. It was thought that the use of real data, while introducing potential problems of prior knowledge, would make the tasks more meaningful for the subjects and help maintain their interest over the course of the testing.

The maps were produced by processing the original distributions into different representations using MapMaker (Select Micro Systems 1989) mapping software and Map II GIS (ThinkSpace 1992) software. The maps were converted to paint-format screen images, and titles and legends were added using SuperPaint (Aldus 1993). This conversion allowed the graphics to be used efficiently within SuperCard (Aldus 1991). "Blackness" between map types of the same distribution was equalized as much as possible, since the relative blackness has proven to be a factor in map comparison decisions (Lloyd and Steinke 1976; Muller 1975). Some aesthetic color was used to make the displays visually more interesting to the subjects. The use of color as a redundant code does not appear to detract from or improve on map reading performance (Patton and Slocum, 1985).

The different cartographic representations of the test distributions were developed using standard cartographic data handling techniques. The original data were count data, and these were mapped using MapMaker to plot dot density maps of each data set. These data were then standardized by area, and five-class choropleth maps were plotted using MapMaker. In the case of the map of Africa showing adherents of Islam, the data were standardized by z-scores, because of the great difference in the size of areal units between countries. Class breaks were determined at $\pm$ 0.26 and $\pm$0.84 standard deviations from the mean for the distribution. These breaks equalize the probability of occurrences in each class (Olson 1972).

Unclassed versions of the choropleth maps were exported to Map II for processing into continuous tone, isoplethic, and nominal representations of the data. These choropleth maps were resampled to point samples by using a randomly placed sample point for each enumeration unit. The point sample locations were initialized with cell values equal to one and all other cells in the coverage with values equal to zero, then a multiplicative overlay with the choropleth map was performed to assign the value for the enumeration unit to the sample point. An interpolation mask was then created from the choropleth map to limit processing to the map area, and the point sample coverages were then interpolated using a weighted distance routine involving the two nearest neighbors in each quadrant around the sample point within 25 cells of the sample point. These values were determined experimentally to derive reasonable looking interpolations and acceptable interpolation times. The interpolations were smoothed using two passes of a low pass filter to eliminate local maxima and minima created by the sample points.

The continuous tone maps were created by continuously shading the values from low to high using a 16-step gray scale. The sixteen steps were part of the Macintosh's default 256-color lookup table and yielded near continuous tone representations. The isoplethic

representations were developed by using the same class breaks as determined for the choropleth maps. The nominal maps were developed by classing cells above the mean as part of the region and those below as out of the region. The unit-grid representations were eliminated from consideration during the construction of the test maps because of the difficulty of resampling the data into a "believable" pattern.

In addition to the set of test stimulus maps, a set of two derivative maps with varying degrees of association to the original distribution were prepared for each distribution and mapped using the five different methods. These maps were developed by degrading the original distributions to the point where the correlations between the derivative maps and the test maps yielded correlation coefficients between .84 and .92 to the original distributions. Maps with these levels of correspondence provide enough variation and similarity to make map comparisons moderately challenging for map users (Olson 1972; Peterson 1979). The same class values and processing techniques described above were applied to each of the derivative maps. These maps were used only in the map comparison questions. The original and the derivative maps were reduced to 60% of their original size so that they would all fit on the screen.

Test questions

Five test questions were designed for each of the 20 test maps, one question for each research hypothesis. The five questions were functionally identical for each map with only minor changes in the wording that referred to the locations. The core and domain task required two sub-questions, the first to determine core areas and the second domain areas. Therefore, a total of 120 map and question combinations were developed for the project. A secondary question had subjects rank how certain they were of their answer to each map use question. The questions were constructed into "cards" and administered in a SuperCard project that presented the map and question followed by the certainty rating. Responses, response times, and certainty ratings were recorded.

The first question was designed to collect information on people's abilities to estimate the relative extent of a region on a map (Figure 3.1). The estimation of relative extent of a distribution is a basic use of regional distribution maps. This question had subjects choose an estimate of the area described from a limited number of possible responses.

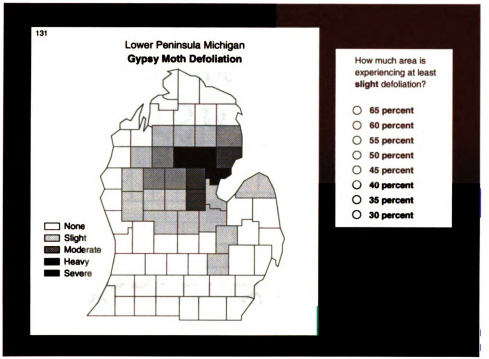

Figure 3.1 Sample question for estimation of relative extent task (55% reduction)

The second question was designed to collect information on the understanding of concepts relating to the core and domain of a region (Figures 3.2a and 3.2b). Core and domain are associated with ideas of stronger and weaker influence on the area within and near the distribution. This question was divided into two parts. In the first part (Figure 3.2a), subjects were asked to compare several different localized areas on the map and identify the area where the distribution exerted the **strongest** influence. In the second part of the question (Figure 3.2b), subjects were asked to compare several different broad areas on the map and identify those areas in which the distribution existed at least to some degree. Answers to these questions will help to determine if ecologically fallacious ideas are being promoted by one or more representations. For example, some representations, such as a nominal map, may indicate internal homogeneity and a distinct boundary where in fact the distribution might be quite heterogeneous and have a transitional boundary. Therefore, subjects may guess at core area locations and they may exclude domain areas.

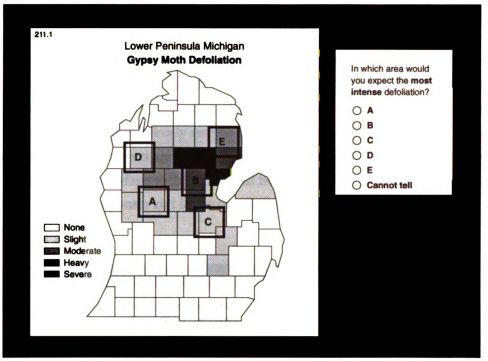

Figure 3.2a Sample question for core task (55% reduction)

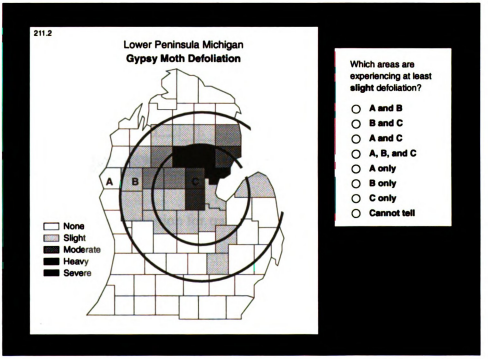

Figure 3.2b Sample question for domain task (55% reduction)

The third question was designed to collect information on the interpretation of boundaries on a map (Figure 3.3). Regions may exhibit definite or indefinite (transitional) boundaries. The interpretation of the type of boundary is important to understanding the nature of a region and the precision with which a region can be defined. In this question, subjects were asked to describe the nature of the distribution by choosing an appropriate profile from several that most closely resembled that presented by a transect across the map. Variability of subjects' answers and their certainty ratings should indicate the transitional nature of the boundary. Maps with transitional boundaries may possibly exhibit greater variation in subjects' responses and lower certainty ratings.

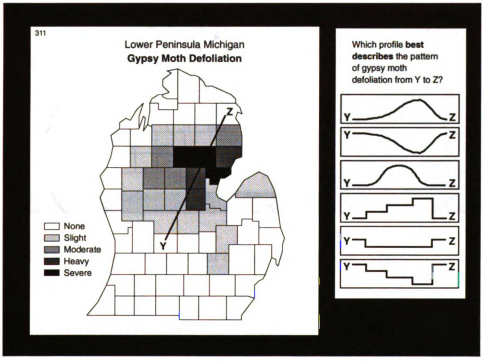

Figure 3.3 Sample question for transitional boundary task (55% reduction)

The fourth question was designed to collect information on the understanding of the internal variability of a region (Figure 3.4). Some phenomena are relatively evenly spread over an area, while others are differentially clustered within a region of influence. This question is similar to the second question in the logic of its construction; however, this question is used to examine the interpretation of intraregional (within) distribution rather

than the idea of areas of influence. In this question, subjects were asked to determine if the region exhibited constant (internal homogeneity) or varying (internal heterogeneity) intensity within its boundary by comparing several intraregional locations on the map.

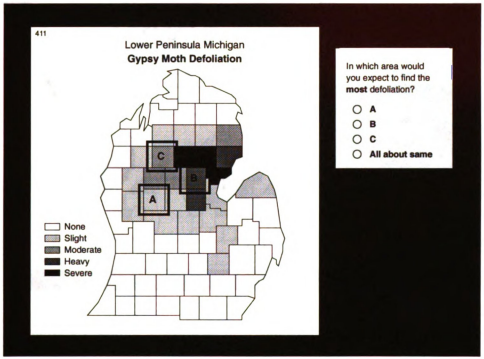

Figure 3.4 Sample question for internal variation task (55% reduction)

The fifth question was designed to collect information on people's abilities to compare maps of similar regional distributions (Figure 3.5). These types of tasks are often used for establishing relationships between different phenomena to help explain other distributions. In this question, subjects were asked to compare the two derivative maps to the original map and choose the one that most closely resembled the original map. The original map was placed at the top of the page and the two derivative maps below. Reaction times and variations in response times and certainty ratings were examined to determine the interaction of the maps for comparison tasks in which maps using similar representation methods are viewed.

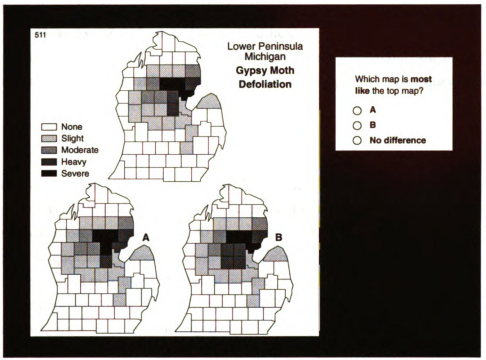

Figure 3.5 Sample question for map comparison task (55% reduction)

Three types of data were collected for each task: a response to the question, reaction time, and a certainty rating. Response accuracy was used primarily to judge whether a subject understood the information presented by the map. Reaction time was used as a surrogate measure for the cognitive efficiency of the task. Additionally, the use of both reaction times and accuracy responses may help to explain potential errors. For example, if accuracy rates decrease as reaction times decrease, the data may reflect an increased willingness on the part of the subject to guess (Kosslyn and Holyoak 1982, 336). Certainty ratings were used as a nominal indicator of the difficulty subjects had with the task. Certainty ratings are often used as secondary data to strengthen or elaborate an analysis (Glanzer 1982), and they have potential uses for stratifying question difficulty and in checking for guesses.

In addition to information from the test questions, background information was collected from subjects. This information included age, gender, major if they were a student or profession if they were a non-student, experience with maps, and whether or not

they worked with maps regularly. Finally, they were asked to define the term 'region'. In addition, as a cross check on the results of the test, subjects were invited to respond orally and informally to the test and to state whether they found any maps easier or more difficult to analyze. This allowed subjects to discuss the different types of symbols and their interpretation of these symbols; it may be possible that they "understand" the meanings of the symbols but may not be able to access this understanding in answering questions.

Test sets

Two test sets of 60 questions were prepared from the 120 map and question combinations in order to minimize subject fatigue and to keep the test to approximately 30 minutes in duration. A minimum of 30 responses was collected for each of the sets. Each subject saw all questions, representations, and distributions somewhere in the test, although they only responded to half the number of possible combinations. The questions in each test set were presented in random order for each subject. Random presentation was used to insure against problems of test ordering interactions.

Procedure

The experiment was administered to three subjects at a time using three Macintosh II computers and Apple 13" High Resolution RGB monitors. The test program was written in SuperTalk and run through SuperCard. The use of the computer facilitated the collection of subject reaction times for viewing (reading), tasking, and responding to questions; this information is not easily obtained with paper map tests. Reaction times are useful in accessing the cognitive 'efficiency' of representations and tasks, the rationale being that 'better' representations should lead to faster reading and response times. In addition, the software allowed for a random presentation order for each subject to counterbalance the effects of presentation order and learning. The test was designed to be approximately 30 minutes in duration. Each subject worked at his or her own pace. The test times ranged from 23 minutes to 42 minutes. The complete test procedure and script for administration are presented in Appendix A.

At the start of the test, a general introduction to the test and description of the experimental procedure were presented to the subjects by the researcher. If the subject agreed to participate, s/he was asked to read and sign a consent form. Specific instructions on the operation of the computer and a set of practice questions to learn the procedure

followed. Once the subject was comfortable with the procedure, the test began. Subjects were given the option to repeat the practice set if they felt unsure of the procedure. Only one subject exercised this option.

Each question required examination of the map followed by use of the mouse to point and click on the appropriate answer. The maps, questions, and answers were always presented in the same positions on the screen. Upon answering a question, a one-second pause was programmed into the test, then the screen blanked and a field appeared that presented the secondary question (Figure 3.6) that had the subject rank how certain s/he was of the answer selected. Again, this question was answered by pointing to and clicking on an answer.

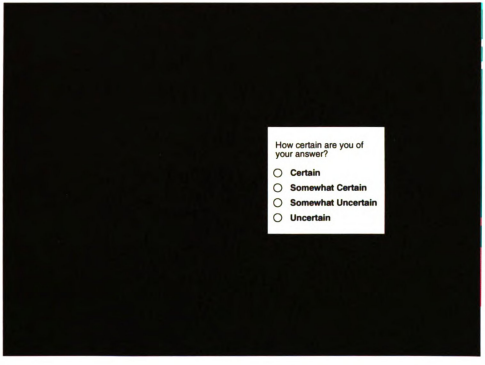

Figure 3.6 Sample question for certainty rating (55% reduction)

Subjects were given short rests after the 20th and 40th questions to allow them to relax and defocus from the computer screen for a moment. During these breaks, subjects answered one of the questions on the background questionnaire. After completing the computer portion, subjects answered the final written question on defining a region. The

researcher then presented a more complete explanation of the test, and asked the subjects if they had any questions or comments on the test, and which maps they found most interesting. Finally, subjects were thanked and paid $5.00 for participating.

Subjects

Sixty-seven subjects were recruited from the University of Wisconsin - River Falls community with posters advertising a map reading experiment and indicating that subjects would be paid $5.00 for participating in the experiment. Thirty women and 37 men were tested ranging in ages from 14 to 59 years, with an average age of 27 years. Subjects included a mix of students, faculty, and staff; 84% were students and the remaining 16% were faculty and staff. The use of subjects from these subpopulations is justified because they are most likely to be engaged in learning regional information. Of those tested, 19% stated no regular use of maps in work and/or study and 81% stated that they used maps in either work and/or study. Sixty-six percent of the subjects came from disciplines in the college of Arts and Sciences, 31% from the college of Plant and Earth Sciences, and 3% from other categories. Geographers or geography majors composed 28% of the subjects.

CHAPTER IV

RESULTS AND DISCUSSION

The first part of this chapter presents the overall results from the experimental project. The results and discussion of this section assess the overall quality of the data and discuss map distribution variations and task variations. The second part of this chapter examines the specific research questions and presents the results, analysis, and discussion task-by-task. Assessment of the performance on these tasks relies mainly on response accuracies and reaction times. The final section of this chapter summarizes the findings of the experimental project and discusses the role of maps in representing regional information and affecting spatial understanding.

Overall Results of the Experimental Project

Responses from the 67 subjects were tabulated and scored for each question. Scores of zero (0) were assigned to correctly answered questions and of scores one (1) were assigned to incorrectly answered questions. In addition, standardized reaction times (z-scores) by subject were calculated for each question. The standardized reaction times allow comparisons within a subject to be made.

The area estimation task involved a forced choice from among 8 percentages varying in 5% increments. Area estimates were judged to be correct if within 5% of the "best" answer from the choices; for example, if the "best" answer was 35% then answers of 30% to 40% were accepted as correct. For the core task, subjects were asked to identify the location where the distribution was most intense. Answers for the non-nominal maps were coded correct if the appropriate location was selected, and answers for the nominal maps were coded correct if subjects chose "Cannot tell". The domain task involved having subjects identify the areas where the distribution was present at a specified level, and answers for this task were coded as correct if the appropriate areas were identified. The surface / transitional boundary task involved having subjects pick a profile that most closely resembled a transect identified on the map. The internal variation task involved having

subjects identify whether or not the region varied in intensity within the area represented on the map. Finally, the comparison task had subjects choose the lower map that most closely resembled the upper map. The lower map with the closest correlation coefficient to the upper map was coded as the correct answer.

Subjects also indicated how certain they were of their answer by selecting from four choices: certain, somewhat certain, somewhat uncertain, and uncertain. Since the question stated, "How certain are you of your answer?", people's responses to this question may be ambiguous, especially in the case of answers such as "Cannot tell" for the main question. The semantics of the rating question were awkward at best in this situation and therefore may have compromised some of the responses.

Preliminary analysis of test versions

A preliminary analysis was performed in order to determine whether or not the two versions of the test were samples from the same population and could be grouped together for analysis. The percent correct responses and an average reaction time for each subject were calculated. These composite scores were aggregated by test version for the 67 subjects (34 subjects took test Version I and 33 subjects took test Version II). Each version of the test was checked for normality by applying a Lilliefors test (Wilkinson 1989, 359). On the initial run using the percent correct and average reaction times by test version, the reaction times were not normally distributed. The reported probabilities ($p < 0.05$) for both accuracy and reaction time indicated that these samples departed from a normal distribution. Normal probability plots confirmed this departure and indicated that two extreme outliers in Version I and one outlier in Version II might be the cause. In Version I, one subject had completed the test in half the anticipated time (15 minutes) and the other had taken almost twice the anticipated time (49 minutes). The outlier from test Version II had exceedingly long reaction times, taking 62 minutes to complete the test. Notes taken during observations of the test sessions identified these subjects as "potential problems". These subjects were eliminated from the data sets and the Lilliefors tests were re-run. The reported probabilities ($p > 0.05$) on both reaction times ($p > 0.837$ and $p > 0.065$ respectively) and percent correct ($p > 0.458$ and $p > 0.119$ respectively) indicated that the data could be considered normally distributed, albeit weakly for the second group.

The second step in this preliminary analysis was to determine whether or not the two versions represented overall responses from the same population. Independent sample t-tests were run on percent correct and on reaction time. For the first test, the null

hypothesis stated that the percent correct do not differ significantly between test versions, and for the second test it stated that the average reaction times do not differ significantly from one another. Results from the first t-test indicated no significant difference between accuracy of the two groups ($p = 0.660$), and the results from the second indicated no difference between reaction times of the two groups ($p = 0.825$). The null hypothesis that differences between the versions occurred due to chance was not rejected. Therefore, the results from the two test versions were aggregated.

Variations in task questions and distributions

Variations in task questions and map distributions were examined using question-by-question percent correct and mean reaction times by map types (Tables 4.1, 4.2 and 4.3). These were analyzed using ANOVA to determine if any biasing resulted from map types across all questions. Before performing the ANOVA, the data were tested for normality and homoscedasticity (equal variances) to determine if the assumptions for the procedure were met. A Lilliefors test was used to test for normality, and in all cases the data could be considered normally distributed ($p > 0.05$). A Bartlett's test was used to compare variances (Wilkinson 1989, 466), and in all cases the variances could be considered equivalent ($p > 0.05$). Therefore, a standard one-way ANOVA was performed on the data to determine if any significant differences occurred between maps across all distributions. The results from these tests for percent correct ($p = 0.534$), reaction time ($p = 0.921$), and standardized reaction times ($p = 0.923$) indicated no significant differences between map types across all questions.

Table 4.1 Percent correct responses by question by map type

Question	Nominal	Choropleth	Isarithmic	Continuous	Dot
1. Area	87.5	52.9	65.3	66.7	25.8
2.1 Core	56.3	83.3	96.7	77.7	91.4
2.2 Domain	55.5	62.5	51.7	46.3	54.7
3. Transitions	50.8	59.5	59.5	70.8	57.8
4. Variation	84.4	89.2	98.3	96.7	75.0
5. Comparisons	31.3	68.6	82.6	78.3	56.3
Overall	*60.9*	*69.3*	*75.7*	*72.8*	*60.2*

Table 4.2 Mean reaction time in seconds by question by map type

Question	Nominal	Choropleth	Isarithmic	Continuous	Dot
1. Area	16.48	23.09	23.52	21.32	26.18
2.1 Core	17.99	14.20	12.84	16.15	11.87
2.2 Domain	18.82	21.62	21.91	22.71	23.58
3. Transitions	20.63	25.53	27.48	24.72	22.38
4. Variation	13.15	14.08	11.73	12.88	13.54
5. Comparisons	19.61	24.53	17.94	15.60	18.35
Overall	*17.78*	*20.45*	*19.23*	*18.89*	*19.32*

Table 4.3 Mean standardized reaction times in z-scores by question by map type

Question	Nominal	Choropleth	Isarithmic	Continuous	Dot
1. Area	-0.245	0.427	0.437	0.200	0.641
2.1 Core	-0.059	-0.442	-0.637	-0.287	-0.727
2.2 Domain	0.002	0.269	0.279	0.337	0.402
3. Transitions	0.144	0.566	0.860	0.530	0.374
4. Variation	-0.573	-0.482	-0.712	-0.637	-0.561
5. Comparisons	0.000	0.491	-0.115	-0.355	-0.100
Overall	*-0.122*	*0.138*	*0.019*	*-0.035*	*0.005*

Differences in response accuracies were examined for each question by map distribution (Table 4.4) and by certainty estimate (Table 4.5). Percent correct responses by map distribution were examined to determine if the assumptions for ANOVA held using the procedure described above. The data were considered normally distributed and variances were considered equal. Results from the ANOVA indicated that differences in responses by distribution could be attributed to chance ($p = 0.331$). The response accuracies were then examined in contrast to the certainty estimates and, in most cases, displayed a decrease in accuracy with a decrease in certainty. Normality and variances were checked and permitted the application of the ANOVA procedure. In this case, significant differences ($p = 0.000$) were detected in performance when grouped by certainty estimates. The uncertain and somewhat uncertain categories were seldom used. Furthermore, these ratings were used, more often than not, only when the response to the main question was also incorrect.

Table 4.4 Percent correct responses by question by distribution

Question	Africa (%)	Georgia (%)	Michigan (%)	Rwanda (%)
1. Area	54.3	50.6	68.1	65.9
2.1 Core	86.9	68.1	86.25	82.5
2.2 Domain	46.9	66.9	66.25	33.6
3. Transitions	64.3	60.0	52.5	61.6
4. Variation	91.9	93.7	96.25	69.3
5. Comparisons	75.0	62.5	83.7	25.3
Overall	*69.9*	*66.9*	*75.5*	*56.3*

Table 4.5 Percent correct responses by question by certainty estimate

Question	Certain (%)	Somewhat Certain (%)	Somewhat Uncertain (%)	Uncertain (%)
1. Area	60.0	63.6	48.4	41.4
2.1 Core	85.6	67.9	68.4	42.8
2.2 Domain	60.8	46.6	38.7	10.0
3. Transitions	67.4	54.5	48.9	37.5
4. Variation	94.5	74.3	53.3	25.0
5. Comparisons	69.12	60.6	45.2	44.4
Overall	*72.9*	*61.25*	*50.5*	*33.5*

To finish the preliminary analysis, the internal consistency of individual subject's responses were checked by running cross-tabulations for fifteen randomly selected subjects. The cross-tabulations were run for right and wrong answers by question and distribution and by question and map type. The purpose of this analysis was to determine if there were any biases in subject's responses by either the distribution or the type of map. No apparent biases were found in the responses for the subjects selected. Therefore, variation in subjects' responses do not appear to have been influenced by these factors.

These results of the preliminary analysis are not surprising. Certain map use tasks are more difficult than others and yield longer reaction times, lower accuracies, and less certainty. In addition, different map types (e.g. choropleth, etc.) have characteristics that may make different tasks easier (or more difficult) than other map types. And finally, different map distributions vary in their spatial characteristics, therefore differences are to

be expected in performing the same tasks with different distributions. On an overall level, these results indicate that there are no systematic trends in using different map types across the different questions. No one map is best for all map use tasks tested. The overall response accuracies within questions indicate differences between map types with the different tasks. These differences are analyzed in the next section.

Results and Discussion of Specific Map Reading Tasks

The main objective of this portion of the analysis is to determine whether or not different representation methods affect the understanding of regional distributions over the six sets of tasks outlined: extent, core, domain, transitions, variability, and comparisons. For this series of tests, the data were grouped by question by map type by map distribution. The cell values for Tables 4.6 - 4.11 are the mean percent correct responses (Score), mean reaction times in seconds (RT), and mean standardized reaction times in z-scores (SDRT). The overall N for each table is 20. Five separate analyses are used to assess the understanding of these aspects of regional distributions.

The analyses of the tasks use methods similar to the ones described in the section above. The first step is to test the data for normality using a Lilliefors test, and the second step is to test for homoscedasticity using a Bartlett's test. The outcomes of these tests determine the appropriate form of the test for differences between map types. Since the problem is essentially one of different 'treatments', analysis of variance procedures (ANOVA) are utilized; if the data do not meet the requirements for ANOVA, the equivalent distribution-free Kruskal-Wallis test (Wilkinson 1989, 360) is appropriate to test for differences in performance on each of the five task areas. No significant difference (failure to reject the null hypotheses) in the tests would indicate that different representations do not lead to differences in understanding of regional distributions as defined by these aspects.

Once the nature of the relationship between the map types is determined for a task, the specific *a priori* research hypothesis is tested for significance. First, the map types are grouped into two categories as specified by the research hypothesis (e.g., maps with definite edges and maps without definite edges) and then the significance of this interaction is assessed. In some instances, the research hypotheses were further refined to perform *post hoc* tests to account for alternate explanations of patterns in the test results. These were tested in the same manner as the original research hypotheses. The remainder of this

section reports the results from these analyses on a task-by-task basis and only notes modifications to the above procedures where necessary.

Area extent task

For the extent task, mean correct responses, mean reaction times, and standardized reaction times (Table 4.6) were normally distributed by map type (Lilliefors probabilities of $p > 0.05$) and the variances were homogeneous (Bartlett probabilities of $p > 0.05$). The results from the ANOVA were significant in all three cases: mean percent correct responses ($p = 0.000$), mean reaction times ($p = 0.015$), and mean standardized reaction times ($p = 0.021$). Therefore, the null hypothesis that there are no differences due to map types is rejected. This indicates that for area estimation there is a significant difference between these variables across different map types. Examining the data in Table 4.6 indicates that subjects performed better, having higher response accuracies and lower reaction times, using the nominal map type than they did using the other map types. The standardized reaction times for the nominal maps indicate that subjects on average performed much faster and that for dot maps, subjects performed much slower on this task. It is interesting to note that the choropleth and the dot map types were the two worst for this map use task.

The contrasts between map types were then examined. The research hypothesis for this task stated that subjects would perform better on maps with definite edges to the regions (nominal, choropleth, and isarithmic) than with maps that lacked definite edges (continuous tone and dot). The results from this contrast test indicated that for response accuracy, there is a significant difference ($p = 0.034$) between the maps with definite edges and those without definite edges in performing area estimations. The results, however, failed to confirm that subjects would perform more rapidly on maps with definite edges ($p = 0.201$). Differences between standardized reaction times also were not significantly different ($p = 0.252$) between bounded and non-bounded regions.

Upon examining the data to explain the results for the reaction times and standardized reaction times, it was observed that subjects performed well on all the continuous tone maps other than Georgia. The Georgia map, as it turns out, was the only truly continuous tone map used in the test. The other three distributions all used a neutral base color for the map and then applied gray continuous shading over this base color. In effect, this produced a defined boundary between the area defining the region and the base map. The result was a map with the qualities both of a nominal map defining the region and of a continuous tone map within the region. "Cartifacts" such as these are quite common in

Table 4.6 Results from area extent estimation task by map type

Nominal representations

Distribution	N	Score (%)	RT (seconds)	SDRT (z-score)
Michigan	32	90.6	15.17	-0.346
Africa	32	90.6	17.93	-0.177
Georgia	32	87.5	15.86	-0.238
Rwanda	32	81.3	16.98	-0.218
Overall	*128*	*87.5*	*16.48*	*-0.245*

Choropleth representations

Distribution	N	Score (%)	RT (seconds)	SDRT (z-score)
Michigan	32	53.1	20.64	0.136
Africa	32	46.9	22.93	0.493
Georgia	32	50.0	24.61	0.592
Rwanda	25	64.0	24.52	0.502
Overall	*121*	*52.9*	*23.09*	*0.427*

Isarithmic representations

Distribution	N	Score (%)	RT (seconds)	SDRT (z-score)
Michigan	32	71.9	18.56	-0.082
Africa	32	59.4	22.71	0.422
Georgia	32	59.4	26.44	0.757
Rwanda	25	72.0	27.17	0.712
Overall	*121*	*65.3*	*23.52*	*0.437*

Continuous tone representations

Distribution	N	Score (%)	RT (seconds)	SDRT (z-score)
Michigan	32	78.1	17.57	-0.121
Africa	32	68.8	21.62	0.214
Georgia	32	43.8	23.51	0.499
Rwanda	24	79.2	23.01	0.211
Overall	*120*	*66.7*	*21.32*	*0.200*

Dot representations

Distribution	N	Score (%)	RT (seconds)	SDRT (z-score)
Michigan	32	46.9	18.95	-0.067
Africa	32	6.3	25.16	0.515
Georgia	32	12.5	32.12	1.142
Rwanda	32	37.5	28.50	0.976
Overall	*128*	*25.8*	*26.18*	*0.641*

map design and what may seem to be only an aesthetic decision may have an unintended impact on the interpretation of the map. A *post hoc* test was performed to determine the nature of this interaction by regrouping the three edged-continuous tone maps together with the bounded maps and re-testing. The interactions indicated that the difference between grouped map types was significant ($p = 0.000$), the reaction times between grouped map types was significant ($p = 0.045$), and the standardized reaction times were not significant ($p = 0.054$), although the last one approached significance. Further contrasts were not examined statistically since it was likely that inter-distribution interactions were coming into play at this level since the Michigan map is a simpler map than the other three.

After looking at the overall scores from these maps and the above analyses, I suggest that more than defined edges is involved in the determination of area estimates. Certainly edges are important; however, judging from the overall trends in the analysis, internal regional variability appears to disturb area estimates. The less cohesive and less contiguous the region, the more difficult area estimation tasks appear to be. Dot maps are particularly difficult for this task, and the other map types with internal variation are less satisfactory than the nominal map. These trends are corroborated by the reaction times and the standardized reaction times being significantly less for the nominal map; this indicates that over the five map types, area estimation is a reasonably easy task with the nominal maps and a more difficult task with the other map types. If one's primary goal is to communicate an understanding of the areal extent of a region visually, a nominal map type is best. In addition, combined map types, e.g., nominal and continuous tone, may improve the interpretation of the extent of a region.

Core task

For the core portion of the task, mean correct responses, mean reaction times, and mean standardized reaction times (Table 4.7) were checked for normality. Reaction times and standardized reaction times were normally distributed by map type (Lilliefors probabilities of $p > 0.05$) and the variances were homogeneous (Bartlett probabilities of $p > 0.05$). Mean correct responses were not normally distributed since they were skewed toward the higher percentages. Linear transformations failed to normalize this variable. Therefore, a nonparametric Kruskal-Wallis ANOVA was used to analyze mean correct responses, and it yielded no significant differences ($p = 0.076$) between map types in the analysis of variance across all map types. Therefore, on the surface, subjects performed as

Table 4.7 Results from core task by map type

Nominal representations

Distribution	N	Score (%)	RT (seconds)	SDRT (z-score)
Michigan	32	78.1	14.81	-0.365
Africa	32	40.6	20.78	0.133
Georgia	32	75.0	19.44	0.125
Rwanda	32	31.3	16.93	-0.131
Overall	*128*	*56.3*	*17.99*	*-0.059*

Choropleth representations

Distribution	N	Score (%)	RT (seconds)	SDRT (z-score)
Michigan	32	100.0	11.09	-0.683
Africa	32	100.0	10.54	-0.834
Georgia	32	40.6	21.23	0.297
Rwanda	24	100.0	13.84	-0.585
Overall	*120*	*83.3*	*14.20*	*-0.442*

Isarithmic representations

Distribution	N	Score (%)	RT (seconds)	SDRT (z-score)
Michigan	32	100.0	9.63	-0.872
Africa	32	100.0	10.85	-0.819
Georgia	32	87.5	17.24	-0.252
Rwanda	24	100.0	13.88	-0.593
Overall	*120*	*96.7*	*12.84*	*-0.637*

Continuous tone representations

Distribution	N	Score (%)	RT (seconds)	SDRT (z-score)
Michigan	32	53.1	18.48	-0.031
Africa	32	93.8	10.85	-0.823
Georgia	32	71.9	22.11	0.196
Rwanda	25	96.0	12.33	-0.547
Overall	*121*	*77.7*	*16.15*	*-0.287*

Dot representations

Distribution	N	Score (%)	RT (seconds)	SDRT (z-score)
Michigan	32	100.0	10.38	-0.848
Africa	32	100.0	9.80	-0.926
Georgia	32	68.8	15.95	-0.360
Rwanda	32	96.9	11.35	-0.774
Overall	*128*	*91.4*	*11.87*	*-0.727*

expected by being able to identify the central core on map types that have internal variability and by recognizing that the core areas could not be identified on the nominal map.

ANOVA procedures were applied to test for differences between mean reaction times and mean standardized reaction times and were insignificant in both cases: mean reaction times ($p = 0.247$) and mean standardized reaction times ($p = 0.132$). Therefore, the null hypothesis that there are no differences due to map types is accepted. This indicates that for identification of core areas there is no significant difference between these variables across different map types. The overall data in Table 4.7, however, reveal that subjects took longer and performed less accurately using the nominal map. The standardized reaction times also reveal that while the core identification task was reasonably easy when compared with other tasks (reaction times were all well below average) that it was more difficult with the nominal map.

The contrasts between map types were then examined. The research hypothesis for this task stated that subjects would perform better on maps with internal variation to the regions (choropleth, isarithmic, continuous tone, and dot) than with maps with no internal variation (nominal). The results from this interaction test indicated that there is a significant difference ($p = 0.010$) between the maps with internal variation and those without internal variation on the accuracy of responses. Performance with the nominal map was significantly worse than with the other map types. Subjects appeared to pick a location at the center of the region as the area of greatest intensity despite the lack of any cartographic evidence; some of this could be based on a willingness to guess or from previous exposure to the distribution with a different map type earlier in the test.

Results from the reaction times failed to confirm that subjects performed more rapidly on maps with internal variation ($p = 0.065$). The times for the nominal representation of the data were the longest but only approached significance. Differences between standardized reaction times were, in contrast, significantly shorter ($p = 0.036$) for the maps with internal variation. This further supports the notion that there was more ambiguity in answering the core task with the nominal distribution than with the other map types and that determination of core areas is one of the easier tasks to perform.

Internal variation within a region appears to play an important role in the identification of the core area of a distribution. Overall, the isarithmic and dot maps performed better than the choropleth and continuous tone maps over this set of distributions. Problems of tonal representation on an RGB monitor for the continuous tone maps could possibly account for poorer performance with this set of maps than with isarithmic and dot maps.

Monitors tend to "dump" the high values and low values of the range used. Furthermore, the actual range of the data had to be scaled to fit within the display range. In the maps on the displays, 16 values of gray were used. This approximated a continuous-tone display on the RGB monitors; however, the highest three tones and the lowest three tones formed two indistinguishable groups. This made the determination of variations in the low values virtually impossible, and may have impacted subjects' abilities to determine the darker areas of the maps when two or more of the choices were reasonably close in value. The distinctions made possible by classifying the data into fewer classes, as with isarithmic maps, apparently made these distinctions more obvious.

Domain task

For the domain portion of the task, mean correct responses, mean reaction times, and mean standardized reaction times (Table 4.8) were normally distributed by map type (Lilliefors probabilities of $p > 0.05$) and the variances were homogeneous (Bartlett probabilities of $p > 0.05$). The results from the ANOVA were insignificant in all three cases: mean percent correct responses ($p = 0.177$), mean reaction times ($p = 0.394$), and mean standardized reaction times ($p = 0.487$). Therefore, the null hypothesis that there are no differences due to map types is accepted, and thus there are no significant differences between the map types in representing the domain areas of regions. No formal research hypothesis was tested due to the resounding lack of significance in the first ANOVA. Examining the data in Table 4.8 indicates that the overall performance on this task was poor for all measures. There were a variety of interpretations as to what constituted the domain of a region. This question asked subjects to choose which of three zones designated on the map were experiencing significantly the phenomena that represented the region. In all cases, two of the three zones were within the main area of influence and the third was marginal. The low rate of response accuracy across the maps indicates that areas of influence are subject to variable interpretations. The outer marginal zone was often included in peoples' interpretations of the area of influence and suggests that people consider the boundaries as transitions. The higher-than-average standardized reaction times across the map types indicate that this was a harder task for the subjects and required greater cognitive processing of the map to make a judgment. In summary, the determination of a region's domain is highly subjective and suggests that a boundary defining the domain is transitional in nature.

Table 4.8 Results from domain task by map type

Nominal representations

Distribution	N	Score (%)	RT (seconds)	SDRT (z-score)
Michigan	32	65.6	19.12	-0.004
Africa	32	28.1	19.36	0.101
Georgia	32	96.9	15.46	-0.328
Rwanda	32	31.3	21.34	0.241
Overall	*128*	*55.5*	*18.82*	*0.002*

Choropleth representations

Distribution	N	Score (%)	RT (seconds)	SDRT (z-score)
Michigan	32	84.4	14.92	-0.369
Africa	32	43.8	19.07	0.061
Georgia	32	68.8	25.41	0.752
Rwanda	24	50.0	28.89	0.756
Overall	*120*	*62.5*	*21.62*	*0.269*

Isarithmic representations

Distribution	N	Score (%)	RT (seconds)	SDRT (z-score)
Michigan	32	59.4	17.57	-0.100
Africa	32	43.8	18.45	-0.065
Georgia	32	56.3	22.01	0.488
Rwanda	24	45.8	32.19	0.964
Overall	*120*	*51.7*	*21.91*	*0.279*

Continuous tone representations

Distribution	N	Score (%)	RT (seconds)	SDRT (z-score)
Michigan	32	56.3	20.46	0.067
Africa	32	40.6	19.36	0.100
Georgia	32	53.1	25.17	0.607
Rwanda	25	32.0	26.76	0.641
Overall	*121*	*46.3*	*22.71*	*0.337*

Dot representations

Distribution	N	Score (%)	RT (seconds)	SDRT (z-score)
Michigan	32	65.6	16.21	-0.200
Africa	32	78.1	17.46	-0.194
Georgia	32	59.4	32.01	1.083
Rwanda	32	15.6	28.64	0.917
Overall	*128*	*54.7*	*23.58*	*0.402*

Transitional boundary task

For the transitional boundary task (Table 4.9), mean correct responses were considered normally distributed (Lilliefors probabilities of $p > 0.05$) with the exception of the continuous tone map (Lilliefors probabilities of $p = 0.016$). Mean reaction times and standardized reaction times were considered normally distributed by map type, and the variances were considered homogeneous for all variables (Bartlett probabilities of $p > 0.05$). A nonparametric Kruskal-Wallis was used to test for differences in responses due to map types since the continuous tone percent correct responses were not normally distributed and resisted transformations to normality due to three nearly identical scores. Standard ANOVA procedures were used for mean reaction times and mean standardized reaction times. The results from the ANOVA were insignificant in all three cases: mean percent correct responses ($p = 0.459$), mean reaction times ($p = 0.225$), and mean standardized reaction times ($p = 0.169$). Therefore, the null hypothesis that there were no differences due to map types was accepted. There were no significant differences between the map types in representing transitional boundaries.

The research hypothesis designed for this task stated that subjects would perform better on this task using the continuous tone and the dot maps. This research hypothesis failed to be accepted ($p = 0.285$) which is consistent with the results described above. This task had subjects choose the profile that "best" represented a transect on the map. Subjects needed both to understand the basic idea of a profile and to understand the implicit form of the data rather than the graphic form by which it was represented on the map. In this task, most subjects chose either the smooth or the stepped profile that showed increases in intensity near the core of a region. Subjects picked the stepped representations that "best" represented the data half as often as the smooth surface form for the same transect (56% vs. 27%). This confirmed that most subjects were familiar with the concept of a profile. They were less familiar, however, with the fact that surfaces represented on choropleth maps are actually smooth. The continuous tone map was most successful in communicating the idea of a smooth continuous surface. The response accuracy for the dot map was lower than for the isarithmic and the choropleth maps, and it is possible that this map was treated as a choropleth map because of the presence of enumeration boundaries on all maps. A *post hoc* test of the continuous tone map against the others failed ($p = 0.117$) to produce a significant difference between the maps. Nominal maps were the worst for this task with the smooth profiles and the stepped surfaces being chosen nearly equally.

Table 4.9 Results from transitional boundary task by map type

Nominal representations

Distribution	N	Score (%)	RT (seconds)	SDRT (z-score)
Michigan	32	46.9	24.77	0.440
Africa	32	31.3	20.95	0.235
Georgia	32	56.3	18.74	0.001
Rwanda	32	68.8	18.05	-0.101
Overall	*128*	*50.8*	*20.63*	*0.144*

Choropleth representations

Distribution	N	Score (%)	RT (seconds)	SDRT (z-score)
Michigan	32	71.9	26.51	0.694
Africa	32	65.6	20.40	0.245
Georgia	32	59.4	27.42	0.710
Rwanda	25	36.0	28.42	0.630
Overall	*121*	*59.5*	*25.53*	*0.566*

Isarithmic representations

Distribution	N	Score (%)	RT (seconds)	SDRT (z-score)
Michigan	32	56.3	29.08	1.135
Africa	32	56.3	35.25	1.559
Georgia	32	59.4	19.87	0.110
Rwanda	25	68.0	25.21	0.575
Overall	*121*	*59.5*	*27.48*	*0.860*

Continuous tone representations

Distribution	N	Score (%)	RT (seconds)	SDRT (z-score)
Michigan	32	65.6	21.25	0.289
Africa	32	84.4	28.35	0.925
Georgia	32	65.6	22.09	0.340
Rwanda	24	66.7	27.99	0.578
Overall	*120*	*70.8*	*24.72*	*0.530*

Dot representations

Distribution	N	Score (%)	RT (seconds)	SDRT (z-score)
Michigan	32	21.9	20.02	0.055
Africa	32	84.4	21.52	0.375
Georgia	32	59.4	27.31	0.864
Rwanda	32	65.6	20.69	0.201
Overall	*128*	*57.8*	*22.38*	*0.374*

The standardized reaction times from this task revealed that it was by far the hardest. Reaction times within each subject were on average much longer for this task. This is probably a much different task than most of the subjects had ever encountered in using maps, and it may indicate the need to better educate people on how to interpret these types of maps rather than relying on raw cartographic intuition.

Internal variation task

The internal variation task was structured to test whether subjects perceived that the regions varied in intensity within the area of influence (Table 4.10). The data were not considered normally distributed across the mean percent correct responses; the isarithmic and dot map were both skewed (Lilliefors probabilities of $p < 0.05$) and could not be normalized due to an extreme value on the dot map and three equal scores on the isarithmic map. Furthermore, the variances between groups were not considered homogeneous for mean correct responses (Bartlett probabilities of $p > 0.05$). Mean reaction times and standardized reaction times were considered normally distributed by map type and the variances were homogeneous for all variables (Bartlett probabilities of $p > 0.05$).

A nonparametric Kruskal-Wallis was used to test for differences in mean correct responses by map types and standard ANOVA procedures were used for mean reaction times and mean standardized reaction times. The results from the ANOVA were insignificant in all three cases: mean percent correct responses ($p = 0.137$), mean reaction times ($p = 0.891$), and mean standardized reaction times ($p = 0.851$). Therefore, the null hypothesis that there were no differences between the means by map type was accepted. In this case, the null hypothesis indicated that subjects performed as expected on the map types. Subjects interpreted a lack of internal variation with the nominal representations and internal variation with the other representations consistently. Therefore, messages concerning intraregional variation are communicated by representations with internal variation and intraregional homogeneity by types without internal variation.

The reaction times for this task were the shortest and were not significantly different from map to map. The overall standardized reaction times were well below average. The lower mean response accuracy for the nominal maps indicates again that some subjects may have guessed in answering this question or that they used prior knowledge from having seen a different version of the map before answering this question. The extremely low response accuracy for the dot map of Rwanda resulted because the three areas demarcated

Table 4.10 Results from internal variation task by map type

Nominal representations

Distribution	N	Score (%)	RT (seconds)	SDRT (z-score)
Michigan	32	90.6	9.95	-0.856
Africa	32	75.0	16.59	-0.323
Georgia	32	93.8	11.46	-0.701
Rwanda	32	78.1	14.58	-0.410
Overall	*128*	*84.4*	*13.15*	*-0.573*

Choropleth representations

Distribution	N	Score (%)	RT (seconds)	SDRT (z-score)
Michigan	32	96.9	12.61	-0.575
Africa	32	100.0	9.35	-0.950
Georgia	32	84.4	13.99	-0.430
Rwanda	24	70.8	22.48	0.199
Overall	*120*	*89.2*	*14.08*	*-0.482*

Isarithmic representations

Distribution	N	Score (%)	RT (seconds)	SDRT (z-score)
Michigan	32	100.0	10.56	-0.845
Africa	32	100.0	11.88	-0.726
Georgia	32	93.8	11.79	-0.587
Rwanda	24	100.0	13.01	-0.681
Overall	*120*	*98.3*	*11.73*	*-0.712*

Continuous tone representations

Distribution	N	Score (%)	RT (seconds)	SDRT (z-score)
Michigan	32	100.0	10.89	-0.793
Africa	32	93.8	13.87	-0.490
Georgia	32	96.9	12.23	-0.735
Rwanda	25	96.0	15.02	-0.500
Overall	*121*	*96.7*	*12.88*	*-0.637*

Dot representations

Distribution	N	Score (%)	RT (seconds)	SDRT (z-score)
Michigan	32	93.8	9.72	-0.931
Africa	32	90.6	20.69	0.120
Georgia	32	100.0	8.80	-0.986
Rwanda	32	43.8	14.95	-0.446
Overall	*128*	*75.0*	*13.54*	*-0.561*

on the map had virtually an equal number of dots; this may have confused the map subjects. Overall, the map types were interpreted consistently with the symbolization used, and this map task was the easiest of the set. When the dot maps for Rwanda are removed, the isarithmic, continuous-tone, and dot maps were consistently interpreted as possessing internal variation. In contrast, the choropleth and nominal maps were more ambiguous.

Map comparison task

The final task involved a series of map comparisons (Table 4.11). Mean correct responses were considered normally distributed (Lilliefors probabilities of $p > 0.05$) with the exception of the continuous tone and isarithmic maps (Lilliefors probabilities of $p = 0.010$ and $p = 0.026$ respectively). These two maps were highly skewed due to low response accuracy on the Rwanda maps. Mean reaction times and standardized reaction times were considered normally distributed by map type and the variances were homogeneous for all variables (Bartlett probabilities of $p > 0.05$). A nonparametric Kruskal-Wallis was used to test for differences in responses due to map types because the isarithmic and continuous tone percent correct responses were not normally distributed. Standard ANOVA procedures were used for mean reaction times and mean standardized reaction times. The results from the ANOVA were insignificant for mean percent correct ($p = 0.251$) and significant for mean reaction times ($p = 0.028$) and mean standardized reaction times ($p = 0.021$). Therefore, the null hypothesis that there are no differences in accuracy due to map types in response accuracy is accepted. There were, however, significant differences in both mean reaction times and standardized reaction times which indicated that some of the maps were easier to work with than others.

The *a priori* research hypothesis set out for this task stated that subjects would perform better using maps with definite edges (nominal, choropleth, and isarithmic) than with maps without definite edges (continuous tone and dot). The data were tested for the contrasts between these two groups. This research hypothesis failed to be accepted ($p = 0.760$). In addition, the contrasts were not significant for reaction times ($p = 0.058$) or for standardized reaction times ($p = 0.051$), although they were close. An examination of the data in Table 4.11 reveals that the logic of map comparisons being edge-based is flawed. Internal graphic variability appears to play an important part in the recognition of similar patterns. This is in apparent contrast to the psychological theories reviewed earlier that stated that recognition was edge-based and that surface characteristics were of secondary importance (Biederman 1987); but this probably reflects the fact that "recognition" is a

Table 4.11 Results from comparison task by map type

Nominal representations

Distribution	N	Score (%)	RT (seconds)	SDRT (z-score)
Michigan	32	68.8	19.09	-0.032
Africa	32	37.5	24.30	0.385
Georgia	32	15.6	19.56	-0.079
Rwanda	32	3.1	15.47	-0.272
Overall	*128*	*31.3*	*19.61*	*0.000*

Choropleth representations

Distribution	N	Score (%)	RT (seconds)	SDRT (z-score)
Michigan	32	68.8	27.68	0.874
Africa	32	50.0	29.20	0.872
Georgia	32	84.4	16.46	-0.217
Rwanda	25	72.0	24.86	0.421
Overall	*121*	*68.6*	*24.53*	*0.491*

Isarithmic representations

Distribution	N	Score (%)	RT (seconds)	SDRT (z-score)
Michigan	32	93.8	16.85	-0.134
Africa	32	96.9	17.81	-0.188
Georgia	32	93.8	18.13	-0.067
Rwanda	25	36.0	19.27	-0.061
Overall	*121*	*82.6*	*17.94*	*-0.115*

Continuous tone representations

Distribution	N	Score (%)	RT (seconds)	SDRT (z-score)
Michigan	32	90.6	14.94	-0.402
Africa	32	100.0	15.55	-0.360
Georgia	32	96.9	13.50	-0.565
Rwanda	24	8.3	19.35	-0.007
Overall	*120*	*78.3*	*15.60*	*-0.355*

Dot representations

Distribution	N	Score (%)	RT (seconds)	SDRT (z-score)
Michigan	32	96.9	15.42	-0.445
Africa	32	90.6	18.32	-0.102
Georgia	32	21.9	20.31	0.137
Rwanda	32	15.6	19.34	0.010
Overall	*128*	*56.3*	*18.35*	*-0.100*

complex concept and is influenced by different features depending on the type of recognition.

In addition, it was noted that performance with the Rwanda map across the map types generated unreasonably low response accuracies. Map size may have affected this question. All of the comparison maps were reduced to fit in the space available and the Rwanda maps had to be reduced the most. This reduction made comparisons between the Rwanda maps exceedingly difficult for all map types, although it is interesting to note that for the choropleth map, the responses for Rwanda were second-to-best in accuracy and reaction times. Reduction also possibly impacted the dot maps in a different way by reducing them to randomly shaded choropleth maps, especially when the enumeration districts were small as in the Rwanda and Georgia maps. Reduction made the dots indistinguishable from one another.

The Rwanda map was removed from the analysis because of the problem noted above, and the ANOVA procedures were re-run as a check on this interaction. This time the result indicated a significant difference between map types on this task across the variables. The mean percent correct responses were still considered abnormally distributed and heteroscedastic, so a Kruskal-Wallis ANOVA was applied and yielded a significant difference between map types ($p = 0.00$). Mean reaction times and standardized reaction times remained significant ($p = 0.049$ and $p = 0.045$ respectively).

A *post hoc* hypothesis was constructed to test the validity of the observation that surface-based recognition might be of greater importance than edge-based recognition. The contrast between those representations with well-articulated surfaces vs. edge-based representations was tested. In this case, because the dot maps appeared to perform as randomly shaded choropleth maps, they were grouped with the nominal and choropleth maps to form the edge-based representations and the isarithmic and continuous tone maps were grouped to form the surface-based representations. The presence of well-defined enumeration boundaries on all of the maps may have intensified this effect. The groups were tested for normality and homoscedasticity and met the requirements for ANOVA. The results from the ANOVA indicated that a significant difference ($p = 0.012$) existed between all the edge-based and surface-based representations, and therefore the null hypothesis of no difference was rejected. In addition, mean reaction times ($p = 0.032$) and standardized reaction times ($p = 0.048$) were both significant. Therefore, surface form appears to play a significant role in the comparison of different maps of the same type and in the time it takes to respond to the questions. The standardized reaction times indicate that map comparisons with the nominal and choropleth maps are average-to-hard tasks and

map comparisons with the isarithmic, continuous tone, and dot maps are easier-than-average map use tasks. The continuous-tone and isarithmic representations were the best once the impacts of the Rwanda maps were removed. The choropleth and dot representations performed well, and the nominal representations were generally unsuitable.

Maps, Representations of Regional Information, and Spatial Understanding

The results from this research have determined empirically that spatial understanding differs with different map types. No one map is best for communicating all the spatial aspects of a region. Five basic tasks were used in the experimental project: area estimation, determination of core and domain, interpretation of transitional boundaries, interpretation of internal variation, and comparison of maps. The response data collected consisted of response answers and reaction times, and these were grouped together to create three variables for analysis: mean percent correct responses, mean reaction times, and mean standardized reaction times by question by distribution by map. Responses were collected from 67 subjects, and the results from 64 of these subjects were used in the analysis.

The results for the specific map use tasks are summarized in Table 4.12. Rankings of the map types for particular tasks are included as a general statement of the utility of different map types for each task. These should be approached as **suggestions** and only in consultation with the significance tests also cited in the table. Within these guidelines, the rankings suggest which map types are most appropriate (indicated in bold text) and which are least appropriate for particular types of tasks. In addition, the difficulty of the tasks is ranked by standardized reaction times. One must realize, however, that some maps invite greater exploration and more careful inspection than others, resulting in an increase in response accuracy, so reaction times may not be a sole measure of the difficulty of the task or the map types.

Results from the area estimation task confirmed that nominal maps were most appropriate. Response accuracy and reaction times confirmed that this map type has definite advantages over the others. Area estimation is a reasonably hard task using the other map types, perhaps due to the internal variation of the other representations. The use of a nominal form of representation in conjunction with other forms, such as the continuous tone, to demarcate the extra-regional areas may improve area estimates by sharpening the boundary but at the risk of negating the impact of the symbolism. Using a double-ended shading scheme would possibly accomplish a similar function but would

Table 4.12 Summary of research findings

Task[1]	Hypothesis test results	Suitability[2]
Internal variation	Overall: No significant differences for any measure. Ha: In this case, subjects correctly identified the lack or presence of internal variation on the appropriate map types. Therefore, no significance confirms an understanding of the representation. Dot representations rated excluding Rwanda maps (see text).	**Isarithmic** **Continuous** **Dot** Choropleth Nominal
Core	Overall: No significant differences for response accuracy or reaction times. Subjects interpreted maps consistently with their symbolization. Ha: Maps with internal variation were significantly better for response accuracy and standardized reaction times, but not for reaction times.	**Isarithmic** **Dot** **Choropleth** **Continuous** Nominal
Comparison	Overall: Significant differences existed for reaction times but not for accuracy. Ha: No significant differences with maps having definite edges. Ha2: Surface-based maps were significantly better than edge-based maps for all measures.	**Isarithmic** **Continuous** Choropleth Dot Nominal
Domain	Overall: No significant differences for any measure. All of the maps expressed a similar, but variable zone of influence for the region. Definite boundaries appear to neither hinder nor promote an understanding of this concept.	Choropleth Nominal Dot Isarithmic Continuous
Area extent	Overall: Significant differences existed between map types for both response accuracy and reaction times. Ha: Maps with definite edges were significantly better for response accuracy but not for reaction times. (In addition to definite edges, low internal variability appears to aid this task.) Nominal maps possess a clear advantage for this task.	**Nominal** Isarithmic Continuous Choropleth Dot
Transitional boundary	Overall: No significant differences for any measure. Ha: No significant difference with the continuous-tone and dot maps for any measure. Continuous-tone was best overall. 56% of the subjects identified correct shape and form and 27% identified correct shape and wrong form. The concept of smooth change appears to be difficult for subjects to identify and no one representation excelled in promoting an understanding of it.	**Continuous** Isarithmic Choropleth Dot Nominal

1 Tasks are ordered from **least** difficult to **most** difficult by overall mean standardized reaction times.

2 Map types are listed from **most** suitable for the task to **least** suitable for the task. Map types listed in **bold** are considered suitable and those in roman text are considered generally unsuitable for the task.

likely be ineffective in creating a definite edge. The area extent task was the second hardest task for map readers in this test set.

Results from the core and domain task indicated that internal variation promotes identification of core areas, whereas internal homogeneity inhibits their identification. Isarithmic and dot representations appeared to communicate this concept better. However, the data revealed that subjects performed most poorly with the nominal map in identification of core areas. The lack of internal variation in this representation makes it difficult to identify the area of greatest intensity. While subjects overall confirmed that they could not identify the core area, the lower response accuracy for the nominal maps was likely due to learning from a previous map or guessing. Much like ancient cartographers endowing maps with beasts in *terra incognita*, these maps may have hidden beasts of their own. The *a priori* research hypothesis was confirmed when the interactions of maps with internal variation were tested against the nominal map. This task was the second easiest for subjects.

Performance on the domain task for all map types was poor. Subjects failed to correctly identify domain areas across all map types. The range of responses for this task was reasonably small and definite edges versus indefinite edges to the region did not lead to more consistent interpretations of a domain area. The dot maps performed almost as well as the nominal maps. If the maps are placed on a continuum of stepped to smooth (treating the dot map as a randomly shaded choropleth map), a trend toward lower accuracy along the continuum is recognized. This lack of agreement might be interpreted as an indication of the transitional nature of the "zone of influence". This portion of the task was slightly harder than average for subjects.

Information about transitional boundaries was not represented best by any one map type. Subjects performed best using the continuous-tone maps, however this difference was not significant. Generally, the correct shape of the distribution was identified most of the time; one third of the subjects who answered the question correctly interpreted the distributions as a stepped surface, and two thirds interpreted the distributions as a smooth surface. This task relied on the subject's ability to disaggregate the data form from the graphic form, and the results indicate that the stepped graphic forms may mislead some map readers as to the nature of the distribution. This task was the hardest in the test set, and is one that would likely benefit from more explicit statements on how to interpret the information presented.

The internal variation task asked subjects to determine whether the region was internally homogenous or variable. This task was similar in design to the core task;

however, all the areas that subjects compared fell "within" the region. The lack of significance on this test confirmed that subjects understood the maps as expected. (This is one of the unusual circumstances where one wants results to be statistically insignificant.) The nominal map was consistently interpreted as homogeneous and the others as having a variable internal structure. In contrast to the core question, guessing did not seem to have played as much of a role in this question since the response accuracies were much higher for nominal maps in this task. This task was the easiest in the test set.

Finally, the map comparison question yielded perhaps some of the most interesting results in the study, most of which were counterintuitive. Overall, significant differences existed in reaction times, but surprisingly, not for response accuracy. The results, however, were opposite those that I had proposed in the original research hypothesis, based on edge-differentiation being a critical component for comparing maps. The maps with well-articulated surface forms were much easier for subjects to compare than were the simpler maps. When a *post hoc* test was performed, the results indicated significant differences in the maps. In addition, map comparison was an easier task than expected. The standardized reaction times indicated faster-than-average performance when compared to the other tasks for all maps except the choropleth map.

During the testing procedures, several interesting behaviors were noted. First, almost half of the subjects were observed pointing at the screen using either the pointer or their fingers. Often they would trace areas on the map or point between several locations. Some subjects were observed to verbalize as in reading with their lips what they were seeing. One subject, who was tested alone, talked to himself throughout the test. His comments consisted of statements like "higher here, lower there" and so forth. Post-test comments indicated that many people "hated", in the words of one subject, the continuous tone maps. This was the only map that elicited consistent comments from nearly half of the subjects. They found it to be "confusing", "too vague", "unordered", "nasty", "ugly", and "difficult". Other subjects, however, had positive comments on the continuous tone maps. They appreciated the "view of the data" it afforded. Some of these reactions can be attributed to the novelty of these maps when compared with the more traditional cartographic forms.

The "define the term 'region'" question elicited responses that covered the realm of definitions discussed in the literature review. They ranged from "an area on the face of the earth" to definitions of functional and formal regions based on a collection of defining characteristics. This range of definitions is to be expected, due to both formal and informal training and different definitions used in different disciplines. Subjects coming from the

natural sciences and colleges of agriculture often referred to a region as a "study area", whereas the subjects in the arts and social sciences had more articulate definitions. That definitions of regions vary is not surprising; that they form a continuum from general to specific, and that almost all of the subjects' definitions fit within the continuum lends support to the use of regions as a powerful means for conceptualizing space at a variety of levels, even among those with no formal training in geography.

Different map types lead to differential understandings of regional information as confirmed by the results from the experimental project undertaken in this research. The fact that different map types lead to variations in responses and reaction times across several different map use tasks indicates that no one map is best for communicating all types of regional information. Each map type has certain graphic and cartographic characteristics that allow it to communicate different information to map readers. In addition, several different map types may be necessary to communicate all the types of information that may be needed to understand a spatial distribution.

Fortunately, we now find ourselves with the abilities to produce several different types of maps from the same data with automated map production techniques and to more easily produce some maps such as continuous tone and dot maps that were quite time consuming to produce with traditional cartographic methods. With these tools we are also seeing a renaissance of the map in geographic analysis which is turning to maps as primary tools for geographic visualization. Regions do not exist until they are conceptualized to help explain processes that create variation over space, and they do not become visible until they are mapped. Once established, regions take on a life of their own and are continually used in analyses of spatial patterns. Understanding not only how regions are created but also how they are represented become critical components of what we do as geographers and cartographers and will help us to better communicate our ideas to others. Mapping still provides one of the most satisfactory methods for this communication, and in so doing, we must articulate (dare I say "carticulate") our cartographic representations.

CHAPTER V

SUMMARY AND CONCLUSIONS

In this dissertation, I have reviewed the geographic and cartographic literature concerning the representation of regional information and developed an experimental project to test the types of information human subjects receive from regional portrayals. The primary purpose of this research project was to determine if different map types produce a differential understanding of regions, using five specific map reading tasks. In this final chapter, I address the significance of the results, issues concerning the methods and procedures used, and finally suggestions for future research.

Significance of Results

MacEachren (1991) questioned whether or not particular map symbolization methods actually communicate the particular spatial characteristics that we as cartographers associate with them. In the case of representing regions, a number of ideas concerning internal variation, core, and map comparisons are communicated adequately through some of the cartographic methods that we employ. Other concepts, such as domain and transitional boundaries, are more difficult to represent. Certain maps tend to be superior for one particular purpose, for example the use of nominal maps in area estimation, and misleading in other tasks, such as the differentiation of internal variation. The validation of these concepts across several different map tasks is unusual in the cartographic literature, and in some ways this dissertation has begun to answer some of the questions about what maps actually communicate through different symbolization.

Furthermore, the results from this dissertation validate that no one map is best for communicating all information about regions. Monmonier (1991) questioned the validity of single map solutions, and this research lends support to the idea that multiple views of the data are highly desirable and should be employed to further our understanding of the spatial aspects of regions. With automated mapping and geographic information systems (GIS), we no longer are tied to a single map solution when several views can be created

efficiently. The same data are capable of supporting many different map forms. The use of maps as visualization tools is becoming exceeding important when large volumes of information must be processed and understood. Our perceptual systems are geared toward creating order and can often sense underlying patterns to which statistical and numerical analysis may not be sensitive. The use of sonification in cartography (Fisher 1994) is an example of a non-visual form of communication to identify patterns that may be difficult to summarize with other methods.

In some areas, the images and the understanding of the maps are stable. Muehrcke (1990) has suggested that stability of cartographic images may be a highly desirable trait for maps and that similar understandings should develop from different representations of the image. The perception of domain areas appeared to develop a stability of sorts since none of the maps performed better than the others in this task. However, the variation of the answers to this question was great. Subjects could not agree on the location of the area under the influence of or dominated by the phenomenon. In a sense, this created a transition between intra- and extra-regional zones, a true transition zone between inclusion and exclusion. Since all the map types performed in a similar fashion, they could be considered stable although they did not perform well in communicating concepts of domain.

In several areas, the results from the research developed in this dissertation were counter-intuitive. The psychological literature pointed to the primacy of edge-based theories of perception. In the map comparison task, surface-based perception appeared to be in operation since subjects performed significantly better in recognizing the most similar patterns with representations that articulated the surface form of the data. This further suggests that the years we have spent simplifying our data to its most basic forms may in essence have done map readers a disservice.

Finally, in working through the analysis it became apparent that there are no design choices for cartographic elements that are simply aesthetic. The use of a neutral background color, chosen for aesthetic reasons, appeared to play a major role in the success with which subjects could perform the area estimation task with the continuous tone map. This produced a redundant coding that aided the perception of the areal extent of the region. Ultimately, this sort of benefit is desirable. A second case arose in the inclusion of the boundaries for the enumeration units on the map. All enumeration boundaries were represented in black for the sake of consistency between maps and were graphically prominent on all of the maps. This may have had a corralling effect on the dots in the dot maps since these were most closely aligned with the choropleth maps in performance. In

essence, the dot maps may have been operating more as randomly shaded choropleth maps because of the boundaries rather than as a more continuous surface.

Reflection on Methods and Procedures

The empirical nature of the work has developed some baseline data by which five different map types convey an understanding of regions over a limited set of tasks. The relative merits of the various map types can be compared to determine which cartographic method might be best for a particular purpose. The inclusion of different distributions, while replicating actual diversity in maps used to represent regions, presents a confounding influence in the analysis. Some distributions were much easier for certain tasks than others. This influence was left in the data and only removed when it was obvious that there was a problem, as in the map comparison tasks with the Rwanda map; the maps were just too small to be interpreted reliably. In spite of the "noise" created by these differences, the trends appeared to be consistent with cartographers' ideas about how these different map types should communicate regional information.

In research of this type, a greater diversity of map distributions might be appropriate to avoid biases of learning. Each subject saw each distribution 15 times throughout the test. Subjects saw the same representation of the distribution three times. The maps were presented randomly for each subject. Ordering may have led to some guessing and learning interactions. Again, these were seen as part of the random cartographic background noise that exists in all map using situations. Prior knowledge will play a role and is one of the hazards of doing research of this type. Using a greater selection of maps would avoid some of these interactions.

In addition, a greater diversity of color schemes should probably have been used for this experiment, and these schemes should have been rotated among the distributions used in testing. A single color plan was used for each distribution. The yellow-to-orange plan used for Michigan was definitely more legible than the other color schemes and the yellow-to-green scheme used for Rwanda was the least legible. The interactions of color schemes, distributions, and tasks could not be disaggregated. These "simply aesthetic" color choices may have played a role in the lower response accuracies for the set of Rwanda maps.

On several of the questions, alternate structuring of the question could be used to better advantage. For the core and domain tasks, having the subjects point to the map and "click" on the locations of highest intensity and then digitize a line to where the phenomenon is at its lowest intensity would have provided more precision in the answers

for these questions. This approach, however, would rely on greater manual dexterity than most uninitiated computer users currently have, but with future generations of computer literate users this method may be feasible. The use of large-screen high-resolution monitors would also have improved the clarity of the maps in the comparison questions.

The use of an overtly empirical method is justified to gather baseline data; however, more subjective approaches may yield a much richer form of information on peoples' understandings of regional information from maps. The use of interview techniques where people are asked to explain the map symbol(s) used to portray a region would yield a greater understanding of what people are actually internalizing when they view a map. I noticed numerous times during the testing that subjects would point to different areas on the maps as they looked at the displays and trace areas with the pointer or point at the screen with their fingers. Several of the subjects were verbalizing what they were seeing as they pointed to the maps, much the way people learning to read will often move their lips while reading. This information could provide a much deeper understanding of the tasks and how people decode the map's symbols into an understanding of the region.

Suggestions for Future Research

The findings from this study suggest several potential areas for future research that extend both into questions of map design for representing regions and into questions of interpreting an understanding of regional information presented with maps. Lewis (1991) has challenged cartographers to develop new techniques for the representation of regions. Understanding our current techniques provides a foothold for such studies. The extension of this work to consider other conventional forms for presenting regional information is justified since graduated point symbol maps and unit grid maps are also used to develop ideas of regional patterns over space. The unit grid maps have a remarkable ability to represent all forms of data from discrete to continuous in a raster format, and fortunately they are easily processed by cell-based geographic information systems. Very little research has investigated the power of these representations. These map forms may provide a basis for the better understanding of cohesiveness, internal variation, and transitions, far beyond the capabilities of more conventional map types.

The impact of combining map types on representations of regional information is an interesting question. As noted with the use of a neutral background on several of the continuous tone maps in this study, the background acted as a redundant nominal coding that enhanced the edge of the region thereby making the maps more effective for the area

estimation task. The use of dot maps with other map forms such as choropleth maps has some tradition in state atlases in the United States. The combination of these techniques needs to be investigated to see if the equivalent of cartographic multiplier effects could be developed by creating cartographic understanding greater than the sum of the component parts.

The role of boundaries was noted as problematic, and this is an additional design area that needs to be investigated to determine the impact they have on the interpretation of different map symbols. The noted impacts on the dot map are a case in point. The role of boundaries also extends into questions of interpretation. When a boundary represents two different regions (for example a tax region vs. a culture region), are the boundaries interpreted in the same way or differently? These questions of interpretation may be context-based, and the same symbols may represent various nuances of meaning.

Finally, extension of this research should examine the use of maps of regions in decision-making processes. This includes the impact that representations have on the processing of regional information both by experts and within the context of geographic information systems. The question is, do different types of maps yield differential ideas about regions and how they are defined by the people and activities that occur within their "confines"? This echoes the question raised by Lewis (1991) and Gore (1984) of whether regions should be treated as containers of human activity or expressions of human activity and relatedness. Ultimately, maps are abstractions of reality and as such cannot take on all the various interrelations that lend credence to their creation. Understanding the differences between the map used to represent the reality and the reality itself is critical.

Ultimately, this project has confirmed some of what we thought and yielded several avenues for future research. The appropriate choice of map type is an important determinant in peoples' abilities to work with the information presented. Care must be exercised in symbol selection in order to represent that which we desire to communicate.

APPENDICES

APPENDIX A

EXPERIMENTAL PROCEDURES

The procedures for the experimental project are described in this appendix. I administered the test and used this script to insure that all subjects received the same introduction and instructions. Actions are indicated with roman text and spoken portions of the procedure are indicated with *italic* text.

Room Preparation

Turn on lights and computers
Put chairs in waiting area
Place sign "Welcome Map Readers" on door

Test Set Preparation

Shuffle SuperCard project to randomize presentation order
Prepare clipboard and pen with forms in the following order:
Consent form
Background questionnaire (write subject ID number on questionnaire)
Cash receipt form

Introduction

Welcome subject(s)
Hello (subject name(s)). Thank you for volunteering to participate in this experiment. My name is Charlie Rader.
Flip sign on door to "Experiment in Progress"
Please, have a seat here.
Offer subject chair near the computer

Introduction to the Experiment

You are participating in a map reading experiment that will improve our understanding of how people understand map symbols. You will look at a series of maps

on the computer screen and answer a question for each map. We will start with a practice session to help you learn how to use the computer, but all you really need to do is point with the mouse and click on an answer. You will get a couple of breaks during the experiment. During these breaks, you will answer some questions about your experience with maps. The computer portion of the test takes about 30 minutes.
Are you still interested in participating?
Before we start, could you please read and sign this consent form. It is required by the university for experiments involving people.

Hand clipboard and pen to subject
Collect consent form(s)
Do you have any further questions before we begin?

Setup Computer

Let's set up the computer for you. Roll your chair so that you can comfortably see the computer screen.

How's the height of the chair? You can adjust the height with the lever on the right side of the seat.

Have you ever used a mouse before? Are you left or right handed?

Adjust mouse pad and center mouse
How's that? You can reposition the mouse on the pad by picking it up and moving it back on the pad if you run off the edge.

Practice

I have a series of 12 practice maps for you to try. As you work through these you can practice using the mouse and you can see the type of questions that you will be asked to answer. You can ask me any questions that you may have.

Point to and press the 'Start Practice' button on the screen.

Point to the different elements on the screen as you show the subject the first card
Each display will look something like this one. A map will appear on the left and a question will appear on the right. Read the question first and then look at the map.

Answer the question to the best of your abilities. Point and click in the circular button by the answer you want to select. A black dot will appear in the middle of the circle to show you that it is selected. Try to answer questions as accurately and quickly as you can.

After answering that question a secondary question will appear and you will rank how certain you were of your answer.

Try a few of these to get the hang of it. Let me know if you have questions.

After six cards, the '**test break**' card will appear

In the real test, every twenty cards this break message will appear. This will give you a chance to rest your eyes, change your position, and such. You will also answer some background questions during these breaks. Fill out the first question on the form on the clipboard now.

Do you have any questions?

Continue to the end of the practice

Do you want more practice before you start the test? Do you have any questions?

Test

*O.K. , click on the '**Start Test**' button to begin the real test*

After the 20th card, the break card appears. Subject answers question on occupation.

O.K. now point and click in the break box to start the test again

After the 40th card, the break card appears. Subject answers question on their experience with maps.

O.K. now point and click in the break box to start the test again

After the 60th card, the end of test card appears. Subject answers question on regions.

Congratulations, you're almost done

Post-Test Interview

Do you have any questions on this map reading test? Did you find any of the maps easier or more difficult?

Write subject's comments and explanations on post-test interview form.

Now, let me tell you a little more about this experiment. I am using this experiment to examine the meaning of map symbols commonly used for representing regions and how people interpret the different types of symbols. I am interested in determining the impact that map symbolization has on peoples' ability to determine the relative extent of an area, and the interpretation of core or central areas, transitional boundaries, internal variability, and comparisons of maps. In this work, I am trying to explain how maps can more effectively communicate these different ideas and ultimately better communicate our understanding of regions to map users.

Do you have any comments or questions about the test?

Record comments on form or provide more explanation

Thank you again for taking the time to do this test. As advertised, here is the $5 for participating. I need you to sign the receipt showing that you received the money.

Give subject $5 and have them sign receipt. Keep one copy of receipt for records.

Thank you again. Have a good day now.

Post-Test Procedures

File consent form, background questions, and post-test interview.

Back-up data file to floppy disk.

Flip sign on door to "Welcome map reader" side and prepare for next subject.

Sample Consent Form and Background Questionnaire

A copy of the informed consent form and background questionnaire used in this study appear on the next two pages. Approval for the use of human subjects in research for this study were obtained from both Michigan State University (IRB# 93-310) and University of Wisconsin - River Falls (Protocol # H9495-7).

Consent to Participation in Human Research Study

Project Title: Representing Regions: Geography, Cartography, and Spatial Understanding

1) Charles P. Rader, Instructor in the Geography Department at the University of Wisconsin - River Falls is conducting this study on map reading that involves the cartographic representation of regions. I would appreciate your participation in this study, as it will help to determine how to improve map design.

   As part of this study, I would like you to take a map reading test that takes 25 to 35 minutes to complete. The procedure will involve having you view a series of maps on a computer screen and answer a series of questions about the maps. During the test you will be given two brief breaks to rest your eyes and I will ask you several background questions concerning your experience with maps. Sixty map readers will participate in this study.

2) Your participation in this study will not present any risks to your physical or mental well being.

3) Your participation in this study does not guarantee any beneficial results other than perhaps a heightened awareness of different types of maps. You understand that you will be paid $5 if you complete the test.

4) The method that I am using is consistent with cartographic testing for deriving data of the type needed for map reading studies and involves standard, academic testing methods.

5) The information gathered from your participation will be anonymous and held in strict confidence. Your responses will be grouped with the responses from the other subjects for analysis and any reporting on the results of this experiment. Within these limits the results of your participation will be available to you upon request.

6) Your participation is on a voluntary basis and you are free to discontinue participation at anytime during the testing without penalty. Payment of the $5 will be forfeited if you choose not to continue the test. The information collected from you at that point will be destroyed.

7) A more complete explanation and the results of this study will be made available upon your request. Should you have questions please contact:

Charles P. Rader
Geography Department
University of Wisconsin - River Falls
River Falls, Wisconsin 54022
(715) 425-3264

If you have complaints about your treatment as a participant in this study, please contact:

William E. Campbell, Chair
Institutional Review Board for the Protection of Human Subjects
University of Wisconsin - River Falls
River Falls, Wisconsin 54022
(715) 425-3195

I have received an explanation of the study and agree to participate.

_____ _____

Name **Date**

This research project has been approved by the University of Wisconsin - River Falls Institutional Review Board for the Protection of Human Subjects.

Background Information Subject Number _____

Representing Regions: Geography, Cartography, and Spatial Understanding.

Age _____
Gender (M /F) _____

1. What is your occupation (or your major, if a student)? Professional ___ Student ___

2. Do you use maps in your work or studies? Yes ___ No ___
   If so, what types of maps do you use?

3. Have you ever studied a region in a course? Yes ___ No ___
   How would you define a region?

APPENDIX B

EXPERIMENTAL MAP DISPLAYS

This appendix includes reduced black and white versions of the test question displays. These are arranged by distribution and map type. All six cards for each distribution and map type appear on the same page. The answers accepted as correct for each display can be found in Table B.1 by question number. Question numbers are found in the upper left-hand corner of each map. The corresponding button for the correct answer is listed in the table. Buttons are arranged from 1 to n from top to bottom for each question.

Since the original map displays were in color, descriptions of the colors used for each distribution and map type are provided in Table B.2. All colors were selected from the default Macintosh 256 color palette.

Table B.1 Correct answers by test version

Version I - Question	Button Number	Version II - Question	Button Number
111.000	7.000	112.000	1.000
113.000	6.000	114.000	3.000
122.000	3.000	121.000	6.000
124.000	4.000	123.000	5.000
131.000	6.000	132.000	3.000
133.000	3.000	134.000	4.000
142.000	3.000	141.000	6.000
144.000	4.000	143.000	2.000
151.000	8.000	152.000	1.000
153.000	1.000	154.000	1.000
212.100	3.000	211.100	2.000
212.200	1.000	211.200	2.000
214.100	5.000	213.100	5.000
214.200	1.000	213.200	3.000
221.100	6.000	222.100	6.000
221.200	2.000	222.200	1.000
223.100	6.000	224.100	6.000
223.200	3.000	224.200	1.000
232.100	3.000	231.100	3.000
232.200	1.000	231.200	2.000
234.100	5.000	233.100	5.000
234.200	1.000	233.200	3.000
241.100	2.000	242.100	3.000
241.200	2.000	242.200	1.000
243.100	5.000	244.100	5.000
243.200	3.000	244.200	1.000
252.100	3.000	251.100	2.000
252.200	1.000	251.200	2.000
254.100	5.000	253.100	5.000
254.200	1.000	253.200	3.000
311.000	1.000	312.000	3.000
313.000	4.000	314.000	4.000
322.000	1.000	321.000	4.000
324.000	4.000	323.000	6.000
331.000	3.000	332.000	3.000
333.000	6.000	334.000	5.000
342.000	5.000	341.000	4.000
344.000	3.000	343.000	2.000
351.000	5.000	352.000	4.000
353.000	4.000	354.000	6.000
412.000	2.000	411.000	2.000
414.000	1.000	413.000	1.000
421.000	4.000	422.000	4.000
423.000	4.000	424.000	4.000
432.000	1.000	431.000	2.000
434.000	1.000	433.000	1.000
441.000	2.000	442.000	3.000
443.000	3.000	444.000	1.000
452.000	2.000	451.000	2.000
454.000	1.000	453.000	1.000
511.000	1.000	512.000	2.000
513.000	1.000	514.000	1.000
522.000	2.000	521.000	1.000
524.000	1.000	523.000	1.000
531.000	1.000	532.000	2.000
533.000	1.000	534.000	1.000
542.000	2.000	541.000	1.000
544.000	1.000	543.000	1.000
551.000	1.000	552.000	2.000
553.000	1.000	554.000	1.000

Table B.2 Colors used on map displays

Michigan - Gypsy Moth Defoliation

	None	Slight	Moderate	Heavy	Severe
Choropleth	pale taupe	yellow	ochre	orange	red-orange
Isarithmic	pale taupe	yellow	ochre	orange	red-orange
Continuous	pale taupe	light gray	medium gray	dark gray	black

	Background	Symbolization
Nominal	pale taupe	orange
Dot	pale taupe	orange

Africa - Adherents of Islam

	Few or None	Low	Moderate	High	Very High
Choropleth	pale yellow	green yellow	olive	medium green	dark green
Isarithmic	pale yellow	green yellow	olive	medium green	dark green
Continuous	pale yellow	light gray	medium gray	dark gray	black

	Background	Symbolization
Nominal	pale yellow	medium green
Dot	pale yellow	medium green

Georgia - Agricultural Production (dollars per acre)

	0 - 20	21 - 35	36 - 80	81 - 135	136 - 378
Choropleth	pale yellow	tan	light brown	medium brown	dark brown
Isarithmic	pale yellow	tan	light brown	medium brown	dark brown
Continuous	white	light gray	medium gray	dark gray	black

	Background	Symbolization
Nominal	tan	medium brown
Dot	tan	orange

Rwanda - Banana Production (kilograms per hectare)

	0 - 360	361 - 980	981 - 1540	1541 - 2150	2151 - 5840
Choropleth	pale yellow	pale taupe	green gray	gray green	medium green
Isarithmic	pale yellow	pale taupe	green gray	gray green	medium green
Continuous	pale taupe	light gray	medium gray	dark gray	black

	Background	Symbolization
Nominal	pale taupe	gray green
Dot	pale taupe	medium green

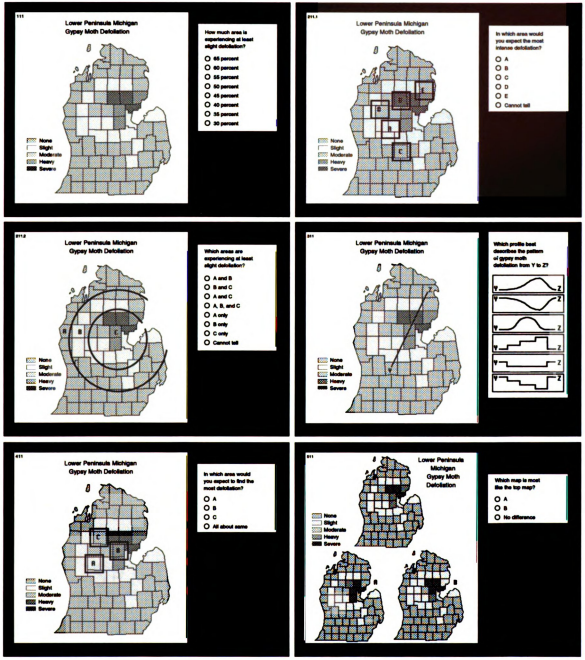

Figure B.1 Choropleth map test displays of Michigan
(Reduced 33% - Original displays in color)

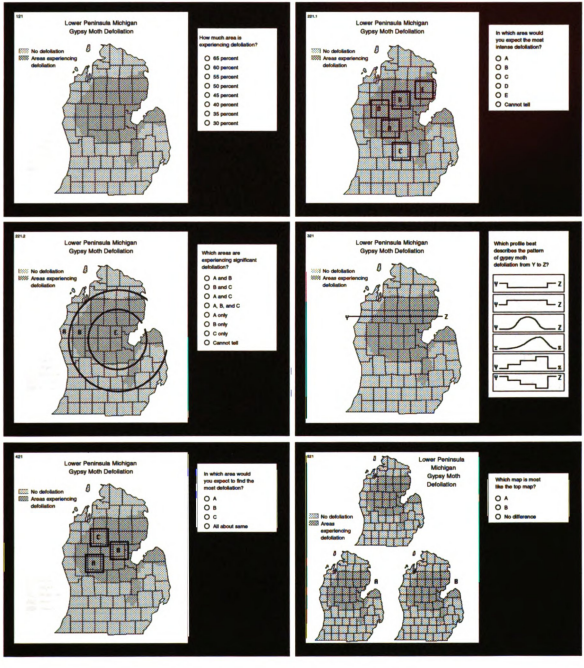

Figure B.2 Nominal map test displays of Michigan
(Reduced 33% - Original displays in color)

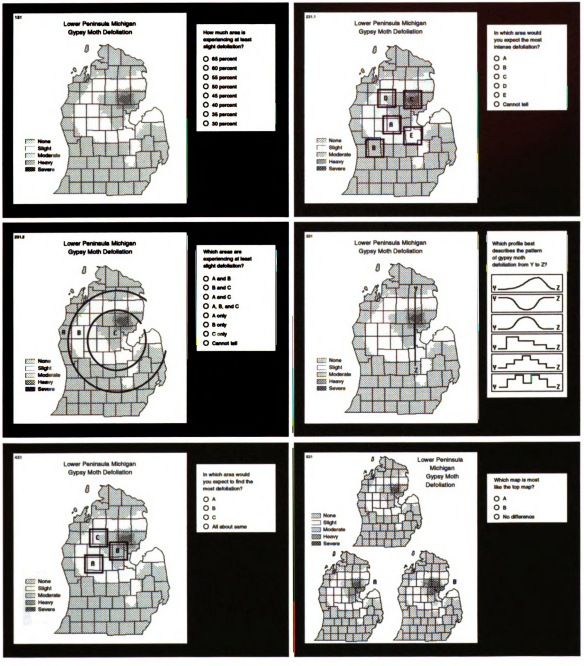

Figure B.3 Isarithmic map test displays of Michigan
(Reduced 33% - Original displays in color)

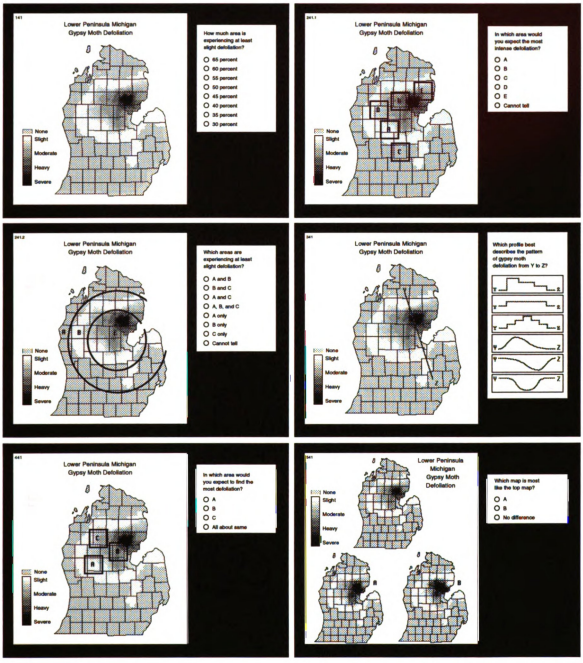

Figure B.4 Continuous-tone map test displays of Michigan
(Reduced 33% - Original displays in color)

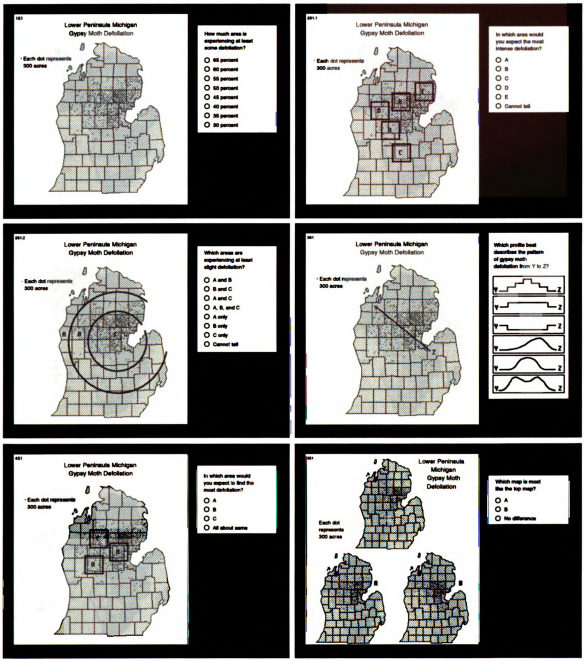

Figure B.5 Dot map test displays of Michigan
(Reduced 33% - Original displays in color)

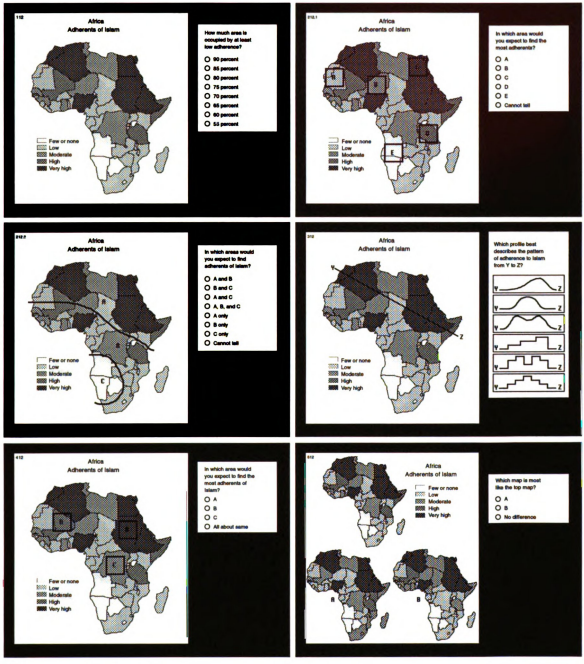

Figure B.6 Choropleth map test displays of Africa
(Reduced 33% - Original displays in color)

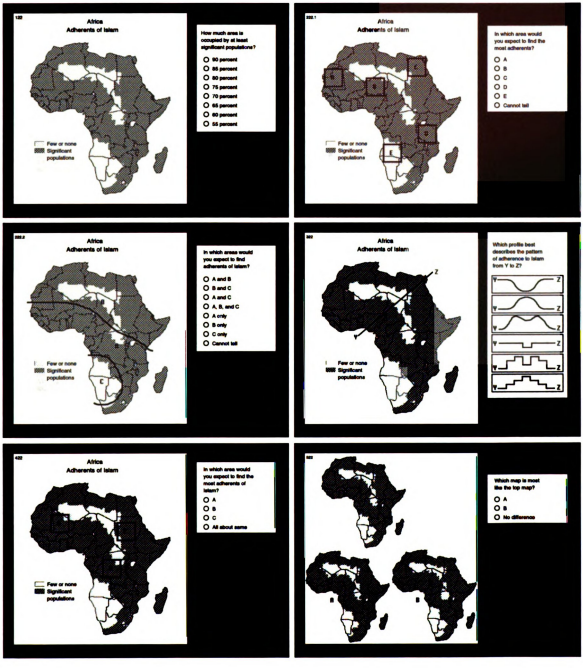

Figure B.7 Nominal map test displays of Africa
(Reduced 33% - Original displays in color)

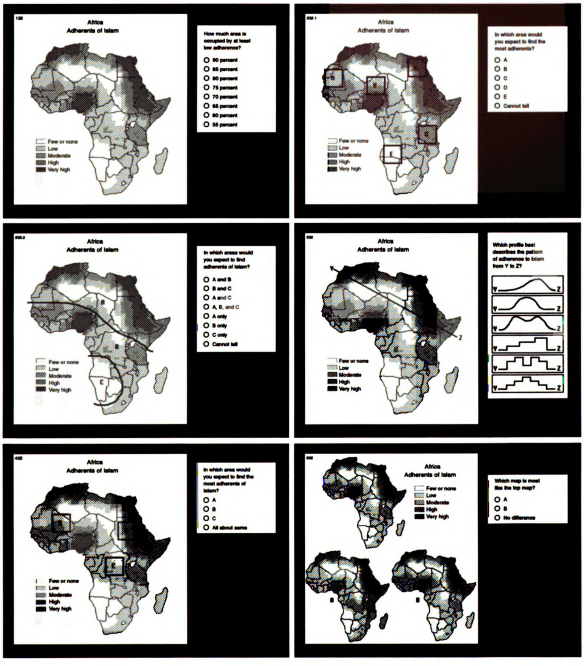

Figure B.8 Isarithmic map test displays of Africa
(Reduced 33% - Original displays in color)

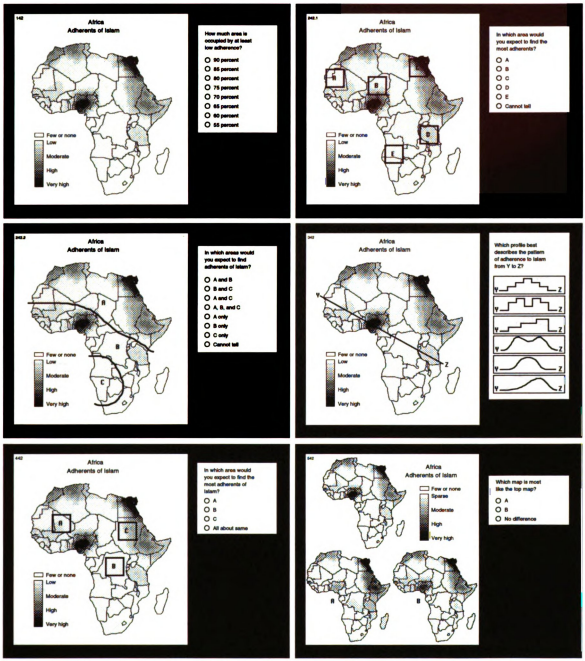

Figure B.9 Continuous-tone map test displays of Africa
(Reduced 33% - Original displays in color)

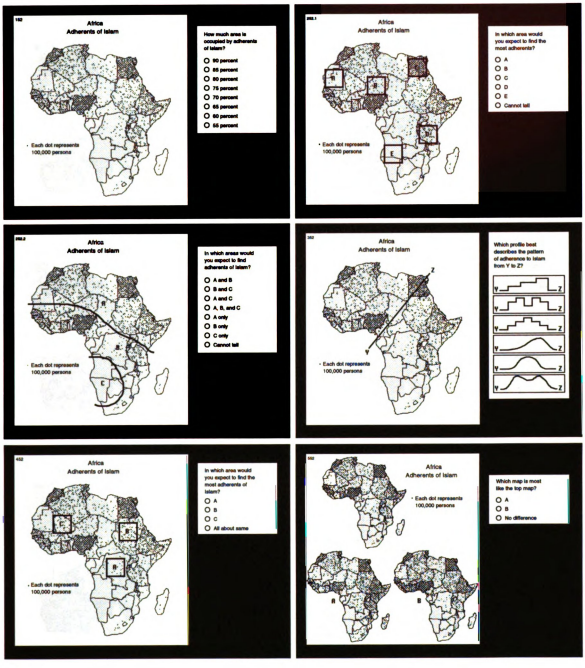

Figure B.10 Dot map test displays of Africa
(Reduced 33% - Original displays in color)

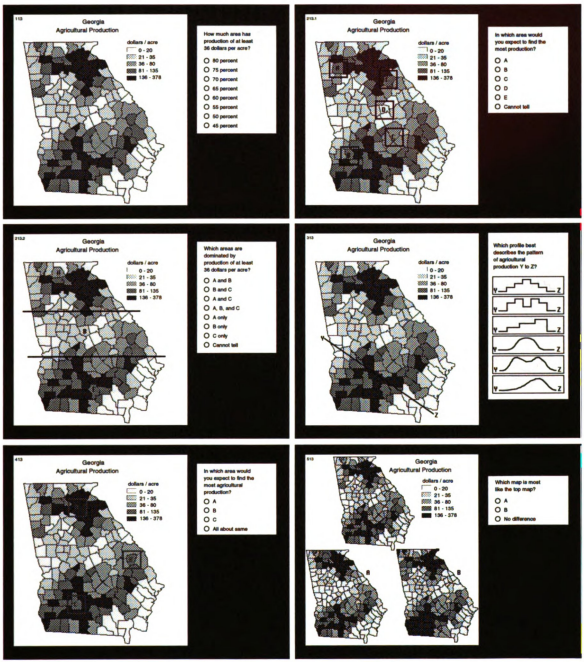

Figure B.11 Choropleth map test displays of Georgia
(Reduced 33% - Original displays in color)

Figure B.12 Nominal map test displays of Georgia
(Reduced 33% - Original displays in color)

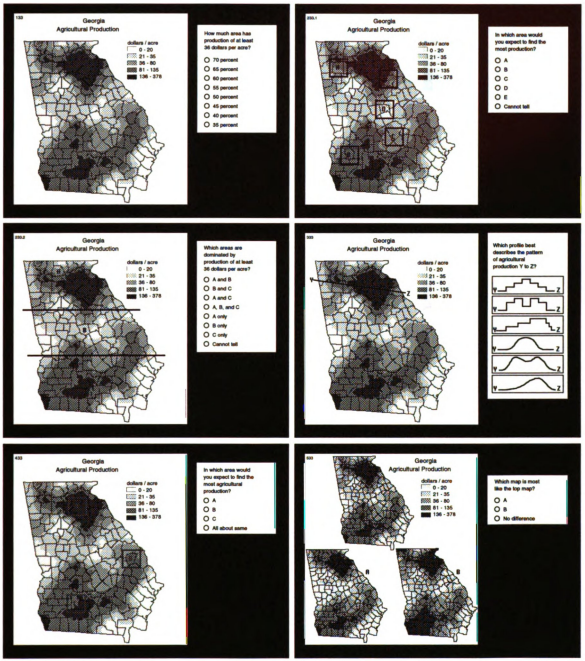

Figure B.13 Isarithmic map test displays of Georgia
(Reduced 33% - Original displays in color)

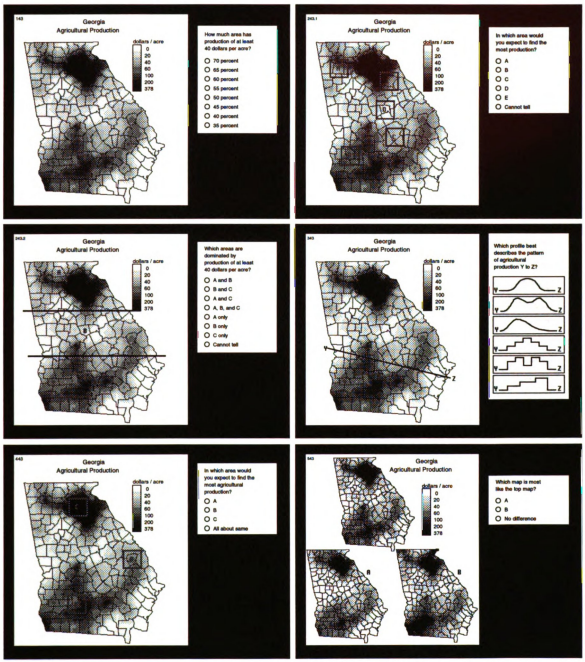

Figure B.14 Continuous-tone map test displays of Georgia (Reduced 33% - Original displays in color)

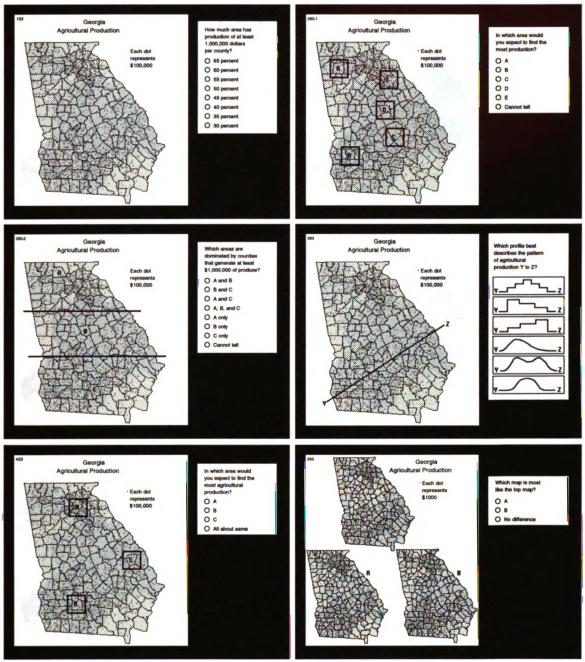

Figure B.15 Dot map test displays of Georgia (Reduced 33% - Original displays in color)

Figure B.16 Choropleth map test displays of Rwanda
(Reduced 33% - Original displays in color)

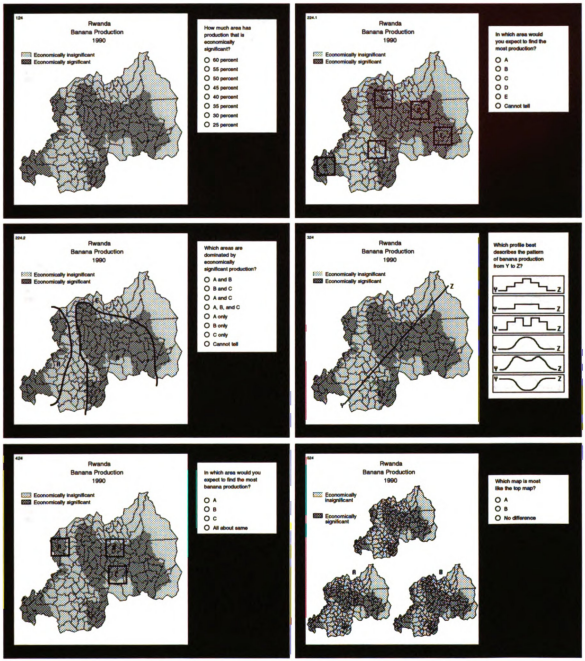

Figure B.17 Nominal map test displays of Rwanda
(Reduced 33% - Original displays in color)

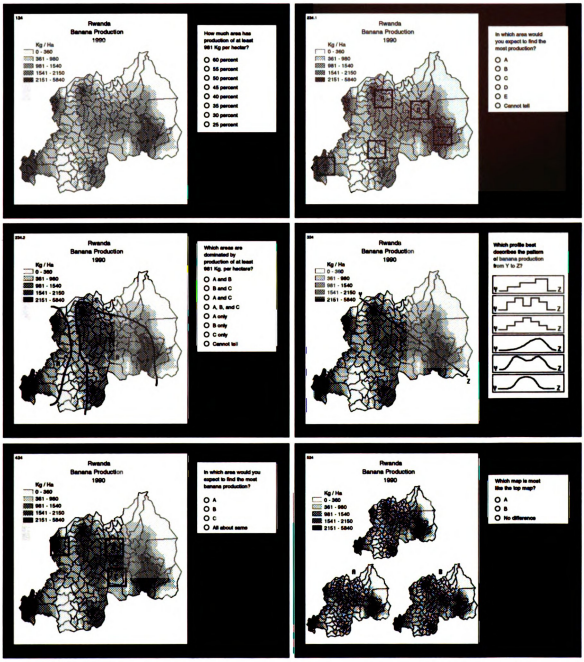

Figure B.18 Isarithmic map test displays of Rwanda
(Reduced 33% - Original displays in color)

Figure B.19 Continuous-tone map test displays of Rwanda
(Reduced 33% - Original displays in color)

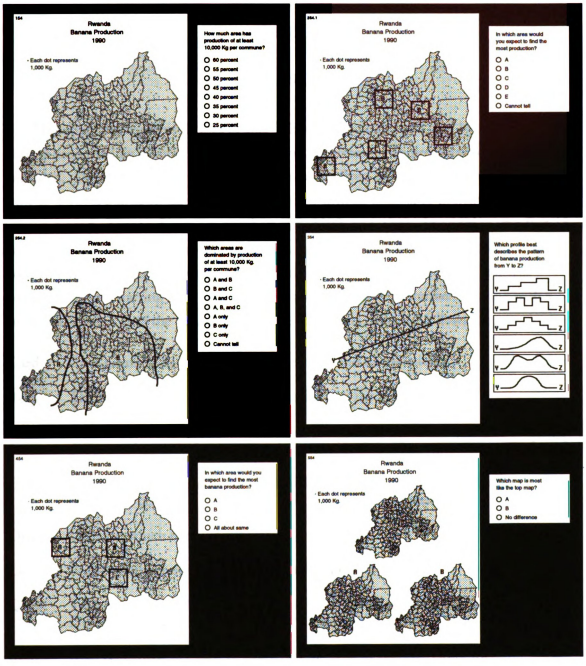

Figure B.20 Dot map test displays of Rwanda
(Reduced 33% - Original displays in color)

APPENDIX C

EXPERIMENTAL DATA

This appendix contains listings (Table C.1) of the experimental data by subject. The listings are sorted by question number; however, information on presentation order is included. Data for three subjects who were excluded from the analysis due to abnormally long or short response times are listed but marked with an asterisk to indicate that they were not used. These subjects are numbers 125, 1102, and 2202. In addition, the first 15 subjects received test versions with mislabeled legends on the choropleth, isarithmic, and continuous-tone maps of Rwanda. These questions were removed from the test sets. Subject numbers starting with a one took Version I and subject numbers starting with a two took Version II of the test. A description of the data collected follows:

Card Card number identifier for task, map type, and distribution.

Resp The button number selected by the subject as the correct answer.

RT Reaction time for question in tics (1/60 second). Calculated by SuperCard as the difference between the time a card appeared and the time an answer was selected.

Conf The certainty rating selected by the subject for the question: 1 - Certain, 2 - Somewhat certain, 3 - Somewhat uncertain, and 4 - Uncertain.

Order Order in which the card appeared in test presentation.

Cor Button number of the correct answer for the question.

Ques Task numbers used in stratifying analysis by question: 1 - Area , 2.1 - Core, 2.2 - Domain, 3 - Transitional boundary, 4 - Internal variation, and 5 - Comparison.

Map Map type identifier used in stratifying analysis by representation method.

Dist Distribution identifier used in stratifying analysis by distribution.

R/W Right or Wrong calculated by subtracting correct from response. Zeros indicate a correct answer; numbers less than or greater than zero indicate a wrong answer.

SdRT Standardized scores (z-scores) of reaction time for the subject by question.

Table C.1 Test results by subject - Subject 110

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	6.000	1231.000	1.000	31.000	7.000	1.000	CHO	MI	-1.000	1.224
113.000	3.000	1427.000	1.000	5.000	6.000	1.000	CHO	GA	-3.000	1.780
122.000	3.000	533.000	1.000	46.000	3.000	1.000	NOM	AF	0.000	-0.758
124.000	1.000	696.000	1.000	35.000	4.000	1.000	NOM	RW	-3.000	-0.295
131.000	5.000	754.000	1.000	32.000	6.000	1.000	ISA	MI	-1.000	-0.131
133.000	1.000	1092.000	1.000	8.000	3.000	1.000	ISA	GA	-2.000	0.829
142.000	1.000	873.000	1.000	11.000	3.000	1.000	CON	AF	-2.000	0.207
151.000	6.000	871.000	2.000	52.000	8.000	1.000	DOT	MI	-2.000	0.202
153.000	4.000	901.000	2.000	48.000	1.000	1.000	DOT	GA	3.000	0.287
212.100	3.000	347.000	1.000	25.000	3.000	2.100	CHO	AF	0.000	-1.286
212.200	1.000	720.000	1.000	22.000	1.000	2.200	CHO	AF	0.000	-0.227
221.100	6.000	1007.000	1.000	4.000	6.000	2.100	NOM	MI	0.000	0.588
221.200	2.000	544.000	1.000	47.000	2.000	2.200	NOM	MI	0.000	-0.727
223.100	6.000	797.000	2.000	1.000	6.000	2.100	NOM	GA	0.000	-0.009
223.200	3.000	738.000	1.000	7.000	3.000	2.200	NOM	GA	0.000	-0.176
232.100	3.000	427.000	1.000	26.000	3.000	2.100	ISA	AF	0.000	-1.059
232.200	5.000	715.000	1.000	44.000	1.000	2.200	ISA	AF	4.000	-0.241
241.100	6.000	1007.000	1.000	16.000	2.000	2.100	CON	MI	4.000	0.588
241.200	2.000	890.000	2.000	30.000	2.000	2.200	CON	MI	0.000	0.256
243.100	5.000	816.000	2.000	15.000	5.000	2.100	CON	GA	0.000	0.045
243.200	3.000	1035.000	2.000	20.000	3.000	2.200	CON	GA	0.000	0.667
252.100	3.000	281.000	1.000	43.000	3.000	2.100	DOT	AF	0.000	-1.474
252.200	4.000	1680.000	1.000	6.000	1.000	2.200	DOT	AF	3.000	2.498
254.100	5.000	469.000	2.000	2.000	5.000	2.100	DOT	RW	0.000	-0.940
254.200	6.000	1009.000	2.000	39.000	1.000	2.200	DOT	RW	5.000	0.593
311.000	1.000	1359.000	2.000	27.000	1.000	3.000	CHO	MI	0.000	1.587
313.000	3.000	711.000	1.000	40.000	4.000	3.000	CHO	GA	-1.000	-0.253
322.000	1.000	843.000	1.000	13.000	1.000	3.000	NOM	AF	0.000	0.122
324.000	4.000	657.000	1.000	60.000	4.000	3.000	NOM	RW	0.000	-0.406
331.000	3.000	1934.000	2.000	29.000	3.000	3.000	ISA	MI	0.000	3.220
333.000	3.000	650.000	1.000	41.000	6.000	3.000	ISA	GA	-3.000	-0.426
342.000	5.000	1034.000	1.000	49.000	5.000	3.000	CON	AF	0.000	0.664
351.000	4.000	985.000	1.000	10.000	5.000	3.000	DOT	MI	-1.000	0.525
353.000	5.000	1164.000	2.000	3.000	4.000	3.000	DOT	GA	1.000	1.033
412.000	2.000	253.000	1.000	58.000	2.000	4.000	CHO	AF	0.000	-1.553
421.000	4.000	229.000	1.000	59.000	4.000	4.000	NOM	MI	0.000	-1.621
423.000	4.000	712.000	1.000	9.000	4.000	4.000	NOM	GA	0.000	-0.250
432.000	1.000	481.000	1.000	17.000	1.000	4.000	ISA	AF	0.000	-0.906
441.000	2.000	413.000	1.000	23.000	2.000	4.000	CON	MI	0.000	-1.099
443.000	3.000	380.000	1.000	14.000	3.000	4.000	CON	GA	0.000	-1.192
452.000	2.000	646.000	2.000	28.000	2.000	4.000	DOT	AF	0.000	-0.437
454.000	4.000	370.000	1.000	55.000	1.000	4.000	DOT	RW	3.000	-1.221
511.000	3.000	1169.000	2.000	33.000	1.000	5.000	CHO	MI	2.000	1.048
513.000	2.000	842.000	2.000	51.000	1.000	5.000	CHO	GA	1.000	0.119
522.000	3.000	533.000	1.000	50.000	2.000	5.000	NOM	AF	1.000	-0.758
524.000	3.000	1213.000	1.000	21.000	1.000	5.000	NOM	RW	2.000	1.173
531.000	1.000	576.000	1.000	34.000	1.000	5.000	ISA	MI	0.000	-0.636
533.000	1.000	604.000	1.000	24.000	1.000	5.000	ISA	GA	0.000	-0.556
542.000	2.000	724.000	1.000	19.000	2.000	5.000	CON	AF	0.000	-0.216
551.000	1.000	599.000	1.000	45.000	1.000	5.000	DOT	MI	0.000	-0.571
553.000	2.000	859.000	1.000	56.000	1.000	5.000	DOT	GA	1.000	0.168

Table C.1 (continued) - Subject 111

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	5.000	454.000	2.000	20.000	7.000	1.000	CHO	MI	-2.000	-0.693
113.000	5.000	1618.000	2.000	6.000	6.000	1.000	CHO	GA	-1.000	2.559
122.000	2.000	552.000	2.000	21.000	3.000	1.000	NOM	AF	-1.000	-0.419
124.000	5.000	969.000	2.000	17.000	4.000	1.000	NOM	RW	1.000	0.746
131.000	6.000	663.000	2.000	45.000	6.000	1.000	ISA	MI	0.000	-0.109
133.000	3.000	657.000	2.000	55.000	3.000	1.000	ISA	GA	0.000	-0.126
142.000	2.000	621.000	1.000	56.000	3.000	1.000	CON	AF	-1.000	-0.226
151.000	7.000	447.000	2.000	25.000	8.000	1.000	DOT	MI	-1.000	-0.713
153.000	5.000	866.000	1.000	39.000	1.000	1.000	DOT	GA	4.000	0.458
212.100	3.000	417.000	1.000	4.000	3.000	2.100	CHO	AF	0.000	-0.796
212.200	4.000	1239.000	2.000	24.000	1.000	2.200	CHO	AF	3.000	1.500
221.100	2.000	540.000	2.000	19.000	6.000	2.100	NOM	MI	-4.000	-0.453
221.200	7.000	1110.000	2.000	2.000	2.000	2.200	NOM	MI	5.000	1.140
223.100	5.000	517.000	2.000	38.000	6.000	2.100	NOM	GA	-1.000	-0.517
223.200	3.000	462.000	1.000	59.000	3.000	2.200	NOM	GA	0.000	-0.671
232.100	3.000	313.000	1.000	42.000	3.000	2.100	ISA	AF	0.000	-1.087
232.200	4.000	404.000	1.000	49.000	1.000	2.200	ISA	AF	3.000	-0.833
241.100	2.000	699.000	1.000	13.000	2.000	2.100	CON	MI	0.000	-0.008
241.200	4.000	723.000	2.000	11.000	2.000	2.200	CON	MI	2.000	0.059
243.100	5.000	854.000	1.000	8.000	5.000	2.100	CON	GA	0.000	0.425
243.200	3.000	745.000	2.000	14.000	3.000	2.200	CON	GA	0.000	0.120
252.100	3.000	309.000	1.000	36.000	3.000	2.100	DOT	AF	0.000	-1.098
252.200	4.000	402.000	2.000	50.000	1.000	2.200	DOT	AF	3.000	-0.838
254.100	5.000	327.000	1.000	37.000	5.000	2.100	DOT	RW	0.000	-1.048
254.200	6.000	2111.000	2.000	12.000	1.000	2.200	DOT	RW	5.000	3.937
311.000	1.000	860.000	1.000	9.000	1.000	3.000	CHO	MI	0.000	0.441
313.000	4.000	545.000	1.000	43.000	4.000	3.000	CHO	GA	0.000	-0.439
322.000	1.000	1332.000	1.000	3.000	1.000	3.000	NOM	AF	0.000	1.760
324.000	4.000	1223.000	2.000	30.000	4.000	3.000	NOM	RW	0.000	1.456
331.000	4.000	1081.000	2.000	7.000	3.000	3.000	ISA	MI	1.000	1.059
333.000	6.000	499.000	2.000	57.000	6.000	3.000	ISA	GA	0.000	-0.567
342.000	5.000	686.000	1.000	46.000	5.000	3.000	CON	AF	0.000	-0.045
351.000	5.000	951.000	2.000	22.000	5.000	3.000	DOT	MI	0.000	0.696
353.000	4.000	519.000	1.000	58.000	4.000	3.000	DOT	GA	0.000	-0.511
412.000	2.000	509.000	2.000	32.000	2.000	4.000	CHO	AF	0.000	-0.539
421.000	2.000	387.000	1.000	60.000	4.000	4.000	NOM	MI	-2.000	-0.880
423.000	1.000	1163.000	1.000	26.000	4.000	4.000	NOM	GA	-3.000	1.288
432.000	1.000	433.000	1.000	51.000	1.000	4.000	ISA	AF	0.000	-0.752
441.000	2.000	341.000	1.000	34.000	2.000	4.000	CON	MI	0.000	-1.009
443.000	3.000	535.000	1.000	16.000	3.000	4.000	CON	GA	0.000	-0.467
452.000	2.000	411.000	1.000	35.000	2.000	4.000	DOT	AF	0.000	-0.813
454.000	4.000	620.000	2.000	5.000	1.000	4.000	DOT	RW	3.000	-0.229
511.000	1.000	1026.000	2.000	28.000	1.000	5.000	CHO	MI	0.000	0.905
513.000	1.000	440.000	1.000	53.000	1.000	5.000	CHO	GA	0.000	-0.732
522.000	1.000	809.000	2.000	48.000	2.000	5.000	NOM	AF	-1.000	0.299
524.000	2.000	499.000	1.000	33.000	1.000	5.000	NOM	RW	1.000	-0.567
531.000	1.000	746.000	2.000	1.000	1.000	5.000	ISA	MI	0.000	0.123
533.000	1.000	594.000	1.000	10.000	1.000	5.000	ISA	GA	0.000	-0.302
542.000	2.000	528.000	1.000	23.000	2.000	5.000	CON	AF	0.000	-0.486
551.000	1.000	611.000	1.000	18.000	1.000	5.000	DOT	MI	0.000	-0.254
553.000	2.000	436.000	2.000	29.000	1.000	5.000	DOT	GA	1.000	-0.743

Table C.1 (continued) - Subject 112

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	6.000	1216.000	3.000	25.000	7.000	1.000	CHO	MI	-1.000	-0.249
113.000	6.000	1972.000	2.000	32.000	6.000	1.000	CHO	GA	0.000	0.801
122.000	4.000	1309.000	3.000	19.000	3.000	1.000	NOM	AF	1.000	-0.120
124.000	5.000	1040.000	2.000	12.000	4.000	1.000	NOM	RW	1.000	-0.493
131.000	8.000	1024.000	2.000	14.000	6.000	1.000	ISA	MI	2.000	-0.515
133.000	5.000	1457.000	3.000	30.000	3.000	1.000	ISA	GA	2.000	0.086
142.000	4.000	931.000	3.000	20.000	3.000	1.000	CON	AF	1.000	-0.644
151.000	8.000	882.000	3.000	34.000	8.000	1.000	DOT	MI	0.000	-0.712
153.000	8.000	5162.000	3.000	7.000	1.000	1.000	DOT	GA	7.000	5.230
212.100	3.000	584.000	1.000	16.000	3.000	2.100	CHO	AF	0.000	-1.126
212.200	1.000	1135.000	1.000	40.000	1.000	2.200	CHO	AF	0.000	-0.361
221.100	6.000	627.000	2.000	55.000	6.000	2.100	NOM	MI	0.000	-1.067
221.200	2.000	1954.000	2.000	1.000	2.000	2.200	NOM	MI	0.000	0.776
223.100	6.000	1365.000	3.000	37.000	6.000	2.100	NOM	GA	0.000	-0.042
223.200	3.000	1830.000	1.000	2.000	3.000	2.200	NOM	GA	0.000	0.604
232.100	3.000	866.000	1.000	23.000	3.000	2.100	ISA	AF	0.000	-0.735
232.200	1.000	1188.000	1.000	35.000	1.000	2.200	ISA	AF	0.000	-0.288
241.100	2.000	880.000	2.000	39.000	2.000	2.100	CON	MI	0.000	-0.715
241.200	2.000	1136.000	1.000	10.000	2.000	2.200	CON	MI	0.000	-0.360
243.100	6.000	1664.000	3.000	38.000	5.000	2.100	CON	GA	1.000	0.373
243.200	4.000	2142.000	2.000	13.000	3.000	2.200	CON	GA	1.000	1.037
252.100	3.000	704.000	1.000	28.000	3.000	2.100	DOT	AF	0.000	-0.960
252.200	1.000	1178.000	1.000	9.000	1.000	2.200	DOT	AF	0.000	-0.301
254.100	5.000	702.000	2.000	46.000	5.000	2.100	DOT	RW	0.000	-0.962
254.200	6.000	2136.000	2.000	60.000	1.000	2.200	DOT	RW	5.000	1.029
311.000	4.000	2348.000	2.000	58.000	1.000	3.000	CHO	MI	3.000	1.323
313.000	3.000	2141.000	2.000	56.000	4.000	3.000	CHO	GA	-1.000	1.036
322.000	4.000	1880.000	2.000	21.000	1.000	3.000	NOM	AF	3.000	0.673
324.000	2.000	729.000	1.000	36.000	4.000	3.000	NOM	RW	-2.000	-0.925
331.000	5.000	636.000	2.000	52.000	3.000	3.000	ISA	MI	2.000	-1.054
333.000	3.000	1550.000	1.000	24.000	6.000	3.000	ISA	GA	-3.000	0.215
342.000	5.000	1937.000	2.000	11.000	5.000	3.000	CON	AF	0.000	0.752
351.000	2.000	1511.000	2.000	50.000	5.000	3.000	DOT	MI	-3.000	0.161
353.000	4.000	1287.000	3.000	31.000	4.000	3.000	DOT	GA	0.000	-0.150
412.000	2.000	792.000	1.000	15.000	2.000	4.000	CHO	AF	0.000	-0.837
421.000	4.000	801.000	1.000	48.000	4.000	4.000	NOM	MI	0.000	-0.825
423.000	4.000	676.000	1.000	59.000	4.000	4.000	NOM	GA	0.000	-0.998
432.000	1.000	1141.000	1.000	33.000	1.000	4.000	ISA	AF	0.000	-0.353
441.000	2.000	1022.000	2.000	53.000	2.000	4.000	CON	MI	0.000	-0.518
443.000	3.000	1270.000	3.000	49.000	3.000	4.000	CON	GA	0.000	-0.174
452.000	2.000	1546.000	3.000	8.000	2.000	4.000	DOT	AF	0.000	0.210
454.000	2.000	792.000	3.000	54.000	1.000	4.000	DOT	RW	1.000	-0.837
511.000	2.000	1517.000	3.000	51.000	1.000	5.000	CHO	MI	1.000	0.169
513.000	1.000	2220.000	3.000	44.000	1.000	5.000	CHO	GA	0.000	1.145
522.000	2.000	1671.000	2.000	45.000	2.000	5.000	NOM	AF	0.000	0.383
524.000	2.000	1448.000	2.000	29.000	1.000	5.000	NOM	RW	1.000	0.073
531.000	1.000	1016.000	2.000	57.000	1.000	5.000	ISA	MI	0.000	-0.526
533.000	1.000	1430.000	2.000	18.000	1.000	5.000	ISA	GA	0.000	0.048
542.000	2.000	1690.000	2.000	4.000	2.000	5.000	CON	AF	0.000	0.409
551.000	1.000	1376.000	3.000	22.000	1.000	5.000	DOT	MI	0.000	-0.027
553.000	1.000	1639.000	3.000	3.000	1.000	5.000	DOT	GA	0.000	0.339

Table C.1 (continued) - Subject 113

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	5.000	787.000	2.000	54.000	7.000	1.000	CHO	MI	-2.000	-0.355
113.000	5.000	1660.000	2.000	10.000	6.000	1.000	CHO	GA	-1.000	1.364
122.000	4.000	780.000	2.000	53.000	3.000	1.000	NOM	AF	1.000	-0.369
124.000	3.000	1361.000	2.000	14.000	4.000	1.000	NOM	RW	-1.000	0.775
131.000	5.000	627.000	2.000	44.000	6.000	1.000	ISA	MI	-1.000	-0.671
133.000	3.000	1550.000	2.000	18.000	3.000	1.000	ISA	GA	0.000	1.147
142.000	8.000	1450.000	2.000	35.000	3.000	1.000	CON	AF	5.000	0.950
144.000	4.000	1509.000	2.000	55.000	4.000	1.000	CON	RW	0.000	1.066
151.000	7.000	969.000	2.000	11.000	8.000	1.000	DOT	MI	-1.000	0.003
153.000	6.000	1542.000	2.000	1.000	1.000	1.000	DOT	GA	5.000	1.131
212.100	3.000	510.000	1.000	13.000	3.000	2.100	CHO	AF	0.000	-0.901
212.200	1.000	517.000	1.000	30.000	1.000	2.200	CHO	AF	0.000	-0.887
214.100	5.000	545.000	1.000	16.000	5.000	2.100	CHO	RW	0.000	-0.832
214.200	1.000	1013.000	2.000	38.000	1.000	2.200	CHO	RW	0.000	0.090
221.100	6.000	544.000	1.000	46.000	6.000	2.100	NOM	MI	0.000	-0.834
221.200	7.000	793.000	2.000	29.000	2.000	2.200	NOM	MI	5.000	-0.344
223.100	6.000	1367.000	2.000	36.000	6.000	2.100	NOM	GA	0.000	0.787
223.200	3.000	959.000	1.000	19.000	3.000	2.200	NOM	GA	0.000	-0.017
232.100	3.000	354.000	1.000	50.000	3.000	2.100	ISA	AF	0.000	-1.208
232.200	1.000	577.000	1.000	48.000	1.000	2.200	ISA	AF	0.000	-0.769
234.100	5.000	422.000	1.000	37.000	5.000	2.100	ISA	RW	0.000	-1.074
234.200	1.000	1358.000	2.000	15.000	1.000	2.200	ISA	RW	0.000	0.769
241.100	2.000	628.000	1.000	27.000	2.000	2.100	CON	MI	0.000	-0.669
241.200	2.000	550.000	1.000	25.000	2.000	2.200	CON	MI	0.000	-0.822
243.100	5.000	597.000	1.000	42.000	5.000	2.100	CON	GA	0.000	-0.730
243.200	3.000	1413.000	2.000	8.000	3.000	2.200	CON	GA	0.000	0.877
252.100	3.000	399.000	1.000	59.000	3.000	2.100	DOT	AF	0.000	-1.120
252.200	1.000	993.000	1.000	9.000	1.000	2.200	DOT	AF	0.000	0.050
254.100	5.000	610.000	1.000	33.000	5.000	2.100	DOT	RW	0.000	-0.704
254.200	6.000	965.000	2.000	21.000	1.000	2.200	DOT	RW	5.000	-0.005
311.000	1.000	1402.000	1.000	56.000	1.000	3.000	CHO	MI	0.000	0.856
313.000	4.000	1348.000	1.000	20.000	4.000	3.000	CHO	GA	0.000	0.749
322.000	1.000	477.000	2.000	58.000	1.000	3.000	NOM	AF	0.000	-0.966
324.000	4.000	1067.000	1.000	43.000	4.000	3.000	NOM	RW	0.000	0.196
331.000	3.000	2912.000	2.000	22.000	3.000	3.000	ISA	MI	0.000	3.829
333.000	3.000	1245.000	1.000	17.000	6.000	3.000	ISA	GA	-3.000	0.546
342.000	5.000	1900.000	2.000	12.000	5.000	3.000	CON	AF	0.000	1.836
344.000	2.000	1956.000	2.000	2.000	3.000	3.000	CON	RW	-1.000	1.947
351.000	2.000	886.000	2.000	52.000	5.000	3.000	DOT	MI	-3.000	-0.160
353.000	4.000	681.000	2.000	51.000	4.000	3.000	DOT	GA	0.000	-0.564
412.000	2.000	566.000	1.000	7.000	2.000	4.000	CHO	AF	0.000	-0.791
414.000	1.000	685.000	1.000	6.000	1.000	4.000	CHO	RW	0.000	-0.556
421.000	4.000	1621.000	1.000	31.000	4.000	4.000	NOM	MI	0.000	1.287
423.000	4.000	543.000	1.000	57.000	4.000	4.000	NOM	GA	0.000	-0.836
432.000	1.000	455.000	1.000	40.000	1.000	4.000	ISA	AF	0.000	-1.009
434.000	1.000	724.000	1.000	28.000	1.000	4.000	ISA	RW	0.000	-0.480
441.000	2.000	548.000	1.000	23.000	2.000	4.000	CON	MI	0.000	-0.826
443.000	3.000	602.000	1.000	5.000	3.000	4.000	CON	GA	0.000	-0.720
452.000	2.000	1094.000	2.000	60.000	2.000	4.000	DOT	AF	0.000	0.249
454.000	1.000	1057.000	2.000	39.000	1.000	4.000	DOT	RW	0.000	0.176
511.000	1.000	1147.000	2.000	49.000	1.000	5.000	CHO	MI	0.000	0.353
513.000	1.000	479.000	1.000	41.000	1.000	5.000	CHO	GA	0.000	-0.962
522.000	1.000	846.000	1.000	34.000	2.000	5.000	NOM	AF	-1.000	-0.239
524.000	2.000	682.000	2.000	32.000	1.000	5.000	NOM	RW	1.000	-0.562
531.000	1.000	962.000	1.000	26.000	1.000	5.000	ISA	MI	0.000	-0.011
533.000	1.000	2150.000	2.000	24.000	1.000	5.000	ISA	GA	0.000	2.329
542.000	2.000	592.000	1.000	47.000	2.000	5.000	CON	AF	0.000	-0.739
544.000	2.000	971.000	2.000	3.000	1.000	5.000	CON	RW	1.000	0.007
551.000	1.000	397.000	1.000	45.000	1.000	5.000	DOT	MI	0.000	-1.123
553.000	1.000	706.000	1.000	4.000	1.000	5.000	DOT	GA	0.000	-0.515

Table C.1 (continued) - Subject 114

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	7.000	913.000	4.000	46.000	7.000	1.000	CHO	MI	0.000	-0.593
113.000	8.000	1912.000	4.000	17.000	6.000	1.000	CHO	GA	2.000	0.921
122.000	4.000	1103.000	3.000	53.000	3.000	1.000	NOM	AF	1.000	-0.305
124.000	5.000	1691.000	2.000	2.000	4.000	1.000	NOM	RW	1.000	0.586
131.000	7.000	1292.000	3.000	13.000	6.000	1.000	ISA	MI	1.000	-0.018
133.000	3.000	1025.000	4.000	43.000	3.000	1.000	ISA	GA	0.000	-0.423
142.000	4.000	1203.000	3.000	40.000	3.000	1.000	CON	AF	1.000	-0.153
144.000	7.000	1203.000	3.000	15.000	4.000	1.000	CON	RW	3.000	-0.153
151.000	7.000	1186.000	4.000	55.000	8.000	1.000	DOT	MI	-1.000	-0.179
153.000	7.000	2343.000	4.000	16.000	1.000	1.000	DOT	GA	6.000	1.575
212.100	3.000	744.000	1.000	8.000	3.000	2.100	CHO	AF	0.000	-0.849
212.200	4.000	644.000	1.000	35.000	1.000	2.200	CHO	AF	3.000	-1.001
214.100	5.000	965.000	1.000	47.000	5.000	2.100	CHO	RW	0.000	-0.514
214.200	8.000	1378.000	1.000	9.000	1.000	2.200	CHO	RW	7.000	0.112
221.100	6.000	1016.000	1.000	52.000	6.000	2.100	NOM	MI	0.000	-0.437
221.200	2.000	1356.000	1.000	6.000	2.000	2.200	NOM	MI	0.000	0.079
223.100	6.000	899.000	1.000	31.000	6.000	2.100	NOM	GA	0.000	-0.614
223.200	3.000	1247.000	1.000	1.000	3.000	2.200	NOM	GA	0.000	-0.087
232.100	3.000	999.000	1.000	23.000	3.000	2.100	ISA	AF	0.000	-0.463
232.200	4.000	1320.000	1.000	33.000	1.000	2.200	ISA	AF	3.000	0.024
234.100	5.000	1064.000	2.000	32.000	5.000	2.100	ISA	RW	0.000	-0.364
234.200	8.000	2012.000	1.000	11.000	1.000	2.200	ISA	RW	7.000	1.073
241.100	5.000	1649.000	2.000	24.000	2.000	2.100	CON	MI	3.000	0.523
241.200	4.000	1065.000	2.000	54.000	2.000	2.200	CON	MI	2.000	-0.363
243.100	5.000	1142.000	2.000	14.000	5.000	2.100	CON	GA	0.000	-0.246
243.200	8.000	1147.000	1.000	10.000	3.000	2.200	CON	GA	5.000	-0.238
252.100	3.000	697.000	1.000	12.000	3.000	2.100	DOT	AF	0.000	-0.921
252.200	1.000	2156.000	4.000	48.000	1.000	2.200	DOT	AF	0.000	1.291
254.100	5.000	712.000	2.000	49.000	5.000	2.100	DOT	RW	0.000	-0.898
254.200	8.000	1612.000	1.000	19.000	1.000	2.200	DOT	RW	7.000	0.467
311.000	1.000	4039.000	4.000	18.000	1.000	3.000	CHO	MI	0.000	4.146
313.000	3.000	2777.000	3.000	26.000	4.000	3.000	CHO	GA	-1.000	2.233
322.000	4.000	2428.000	2.000	4.000	1.000	3.000	NOM	AF	3.000	1.704
324.000	4.000	825.000	2.000	38.000	4.000	3.000	NOM	RW	0.000	-0.726
331.000	5.000	2395.000	3.000	29.000	3.000	3.000	ISA	MI	2.000	1.654
333.000	3.000	1831.000	2.000	58.000	6.000	3.000	ISA	GA	-3.000	0.799
342.000	1.000	1474.000	4.000	37.000	5.000	3.000	CON	AF	-4.000	0.257
344.000	3.000	1638.000	4.000	60.000	3.000	3.000	CON	RW	0.000	0.506
351.000	4.000	1097.000	4.000	25.000	5.000	3.000	DOT	MI	-1.000	-0.314
353.000	5.000	1846.000	4.000	34.000	4.000	3.000	DOT	GA	1.000	0.821
412.000	2.000	611.000	1.000	44.000	2.000	4.000	CHO	AF	0.000	-1.051
414.000	1.000	2245.000	2.000	7.000	1.000	4.000	CHO	RW	0.000	1.426
421.000	4.000	729.000	1.000	3.000	4.000	4.000	NOM	MI	0.000	-0.872
423.000	4.000	534.000	1.000	28.000	4.000	4.000	NOM	GA	0.000	-1.168
432.000	1.000	690.000	1.000	27.000	1.000	4.000	ISA	AF	0.000	-0.931
434.000	1.000	527.000	2.000	57.000	1.000	4.000	ISA	RW	0.000	-1.178
441.000	2.000	737.000	1.000	21.000	2.000	4.000	CON	MI	0.000	-0.860
443.000	3.000	877.000	1.000	5.000	3.000	4.000	CON	GA	0.000	-0.648
452.000	2.000	890.000	3.000	22.000	2.000	4.000	DOT	AF	0.000	-0.628
454.000	4.000	1176.000	2.000	20.000	1.000	4.000	DOT	RW	3.000	-0.194
511.000	1.000	1723.000	3.000	45.000	1.000	5.000	CHO	MI	0.000	0.635
513.000	1.000	607.000	2.000	50.000	1.000	5.000	CHO	GA	0.000	-1.057
522.000	2.000	2225.000	4.000	30.000	2.000	5.000	NOM	AF	0.000	1.396
524.000	2.000	404.000	2.000	59.000	1.000	5.000	NOM	RW	1.000	-1.365
531.000	1.000	1457.000	4.000	56.000	1.000	5.000	ISA	MI	0.000	0.232
533.000	1.000	863.000	2.000	41.000	1.000	5.000	ISA	GA	0.000	-0.669
542.000	2.000	905.000	2.000	39.000	2.000	5.000	CON	AF	0.000	-0.605
544.000	2.000	676.000	2.000	51.000	1.000	5.000	CON	RW	1.000	-0.952
551.000	1.000	1316.000	1.000	36.000	1.000	5.000	DOT	MI	0.000	0.018
553.000	2.000	1014.000	3.000	42.000	1.000	5.000	DOT	GA	1.000	-0.440

Table C.1 (continued) - Subject 115

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	8.000	422.000	2.000	35.000	7.000	1.000	CHO	MI	1.000	-0.915
113.000	7.000	1727.000	2.000	45.000	6.000	1.000	CHO	GA	1.000	1.012
122.000	4.000	985.000	2.000	46.000	3.000	1.000	NOM	AF	1.000	-0.084
124.000	4.000	583.000	2.000	56.000	4.000	1.000	NOM	RW	0.000	-0.677
131.000	7.000	830.000	2.000	17.000	6.000	1.000	ISA	MI	1.000	-0.312
133.000	3.000	885.000	2.000	31.000	3.000	1.000	ISA	GA	0.000	-0.231
142.000	3.000	1001.000	2.000	43.000	3.000	1.000	CON	AF	0.000	-0.060
144.000	5.000	1323.000	2.000	41.000	4.000	1.000	CON	RW	1.000	0.416
151.000	7.000	1205.000	2.000	26.000	8.000	1.000	DOT	MI	-1.000	0.241
153.000	2.000	3092.000	2.000	55.000	1.000	1.000	DOT	GA	1.000	3.028
212.100	3.000	402.000	1.000	37.000	3.000	2.100	CHO	AF	0.000	-0.945
212.200	1.000	1285.000	1.000	5.000	1.000	2.200	CHO	AF	0.000	0.360
214.100	5.000	474.000	1.000	28.000	5.000	2.100	CHO	RW	0.000	-0.838
214.200	1.000	1539.000	1.000	38.000	1.000	2.200	CHO	RW	0.000	0.735
221.100	6.000	985.000	1.000	7.000	6.000	2.100	NOM	MI	0.000	-0.084
221.200	2.000	506.000	1.000	12.000	2.000	2.200	NOM	MI	0.000	-0.791
223.100	6.000	968.000	1.000	22.000	6.000	2.100	NOM	GA	0.000	-0.109
223.200	3.000	769.000	1.000	21.000	3.000	2.200	NOM	GA	0.000	-0.403
232.100	3.000	321.000	1.000	42.000	3.000	2.100	ISA	AF	0.000	-1.064
232.200	1.000	515.000	1.000	15.000	1.000	2.200	ISA	AF	0.000	-0.778
234.100	5.000	366.000	2.000	57.000	5.000	2.100	ISA	RW	0.000	-0.998
234.200	1.000	1285.000	1.000	49.000	1.000	2.200	ISA	RW	0.000	0.360
241.100	6.000	698.000	1.000	10.000	2.000	2.100	CON	MI	4.000	-0.507
241.200	2.000	843.000	1.000	1.000	2.000	2.200	CON	MI	0.000	-0.293
243.100	5.000	1676.000	2.000	53.000	5.000	2.100	CON	GA	0.000	0.937
243.200	3.000	1271.000	2.000	23.000	3.000	2.200	CON	GA	0.000	0.339
252.100	3.000	409.000	1.000	4.000	3.000	2.100	DOT	AF	0.000	-0.934
252.200	1.000	558.000	1.000	44.000	1.000	2.200	DOT	AF	0.000	-0.714
254.100	5.000	429.000	1.000	29.000	5.000	2.100	DOT	RW	0.000	-0.905
254.200	6.000	1519.000	2.000	2.000	1.000	2.200	DOT	RW	5.000	0.705
311.000	1.000	2721.000	1.000	48.000	1.000	3.000	CHO	MI	0.000	2.480
313.000	4.000	625.000	1.000	16.000	4.000	3.000	CHO	GA	0.000	-0.615
322.000	3.000	762.000	1.000	58.000	1.000	3.000	NOM	AF	2.000	-0.413
324.000	4.000	617.000	1.000	30.000	4.000	3.000	NOM	RW	0.000	-0.627
331.000	5.000	949.000	1.000	60.000	3.000	3.000	ISA	MI	2.000	-0.137
333.000	3.000	746.000	1.000	47.000	6.000	3.000	ISA	GA	-3.000	-0.436
342.000	1.000	3298.000	1.000	3.000	5.000	3.000	CON	AF	-4.000	3.332
344.000	3.000	1101.000	1.000	9.000	3.000	3.000	CON	RW	0.000	0.088
351.000	5.000	1390.000	1.000	13.000	5.000	3.000	DOT	MI	0.000	0.515
353.000	5.000	1590.000	2.000	18.000	4.000	3.000	DOT	GA	1.000	0.810
412.000	2.000	445.000	1.000	33.000	2.000	4.000	CHO	AF	0.000	-0.881
414.000	4.000	531.000	1.000	52.000	1.000	4.000	CHO	RW	3.000	-0.754
421.000	4.000	322.000	1.000	14.000	4.000	4.000	NOM	MI	0.000	-1.063
423.000	4.000	261.000	1.000	59.000	4.000	4.000	NOM	GA	0.000	-1.153
432.000	1.000	534.000	1.000	24.000	1.000	4.000	ISA	AF	0.000	-0.750
434.000	1.000	403.000	1.000	40.000	1.000	4.000	ISA	RW	0.000	-0.943
441.000	2.000	375.000	1.000	6.000	2.000	4.000	CON	MI	0.000	-0.984
443.000	3.000	732.000	1.000	32.000	3.000	4.000	CON	GA	0.000	-0.457
452.000	4.000	341.000	1.000	51.000	2.000	4.000	DOT	AF	2.000	-1.035
454.000	4.000	1385.000	2.000	20.000	1.000	4.000	DOT	RW	3.000	0.507
511.000	1.000	2239.000	1.000	19.000	1.000	5.000	CHO	MI	0.000	1.768
513.000	3.000	1293.000	1.000	34.000	1.000	5.000	CHO	GA	2.000	0.371
522.000	3.000	2201.000	2.000	39.000	2.000	5.000	NOM	AF	1.000	1.712
524.000	2.000	1081.000	1.000	54.000	1.000	5.000	NOM	RW	1.000	0.058
531.000	1.000	944.000	1.000	50.000	1.000	5.000	ISA	MI	0.000	-0.144
533.000	1.000	729.000	1.000	27.000	1.000	5.000	ISA	GA	0.000	-0.462
542.000	2.000	1549.000	1.000	8.000	2.000	5.000	CON	AF	0.000	0.749
544.000	2.000	2220.000	2.000	36.000	1.000	5.000	CON	RW	1.000	1.740
551.000	1.000	1130.000	1.000	25.000	1.000	5.000	DOT	MI	0.000	0.131
553.000	1.000	1108.000	2.000	11.000	1.000	5.000	DOT	GA	0.000	0.098

Table C.1 (continued) - Subject 116

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	6.000	694.000	4.000	35.000	7.000	1.000	CHO	MI	-1.000	-0.818
113.000	4.000	955.000	4.000	48.000	6.000	1.000	CHO	GA	-2.000	-0.321
122.000	3.000	1262.000	3.000	5.000	3.000	1.000	NOM	AF	0.000	0.263
124.000	4.000	1260.000	4.000	34.000	4.000	1.000	NOM	RW	0.000	0.260
131.000	5.000	437.000	4.000	58.000	6.000	1.000	ISA	MI	-1.000	-1.307
133.000	4.000	2206.000	3.000	4.000	3.000	1.000	ISA	GA	1.000	2.060
142.000	3.000	1088.000	4.000	37.000	3.000	1.000	CON	AF	0.000	-0.068
144.000	5.000	1379.000	4.000	16.000	4.000	1.000	CON	RW	1.000	0.486
151.000	6.000	497.000	4.000	51.000	8.000	1.000	DOT	MI	-2.000	-1.193
153.000	4.000	1735.000	4.000	9.000	1.000	1.000	DOT	GA	3.000	1.164
212.100	3.000	660.000	1.000	36.000	3.000	2.100	CHO	AF	0.000	-0.883
212.200	4.000	404.000	1.000	54.000	1.000	2.200	CHO	AF	3.000	-1.370
214.100	5.000	801.000	2.000	52.000	5.000	2.100	CHO	RW	0.000	-0.614
214.200	1.000	2421.000	2.000	14.000	1.000	2.200	CHO	RW	0.000	2.469
221.100	2.000	1316.000	1.000	28.000	6.000	2.100	NOM	MI	-4.000	0.366
221.200	7.000	983.000	2.000	24.000	2.000	2.200	NOM	MI	5.000	-0.268
223.100	6.000	1880.000	2.000	6.000	6.000	2.100	NOM	GA	0.000	1.440
223.200	3.000	1424.000	1.000	1.000	3.000	2.200	NOM	GA	0.000	0.572
232.100	3.000	639.000	1.000	47.000	3.000	2.100	ISA	AF	0.000	-0.923
232.200	4.000	1086.000	1.000	30.000	1.000	2.200	ISA	AF	3.000	-0.072
234.100	5.000	1265.000	1.000	8.000	5.000	2.100	ISA	RW	0.000	0.269
234.200	1.000	538.000	2.000	22.000	1.000	2.200	ISA	RW	0.000	-1.115
241.100	2.000	1699.000	2.000	19.000	2.000	2.100	CON	MI	0.000	1.095
241.200	4.000	1093.000	1.000	38.000	2.000	2.200	CON	MI	2.000	-0.058
243.100	5.000	2078.000	2.000	12.000	5.000	2.100	CON	GA	0.000	1.817
243.200	4.000	588.000	2.000	50.000	3.000	2.200	CON	GA	1.000	-1.020
252.100	3.000	576.000	1.000	23.000	3.000	2.100	DOT	AF	0.000	-1.042
252.200	4.000	1092.000	2.000	41.000	1.000	2.200	DOT	AF	3.000	-0.060
254.100	5.000	503.000	2.000	55.000	5.000	2.100	DOT	RW	0.000	-1.181
254.200	6.000	1404.000	2.000	21.000	1.000	2.200	DOT	RW	5.000	0.534
311.000	1.000	1558.000	1.000	18.000	1.000	3.000	CHO	MI	0.000	0.827
313.000	4.000	1168.000	2.000	49.000	4.000	3.000	CHO	GA	0.000	0.084
322.000	4.000	465.000	2.000	59.000	1.000	3.000	NOM	AF	3.000	-1.254
324.000	2.000	1421.000	2.000	7.000	4.000	3.000	NOM	RW	-2.000	0.566
331.000	5.000	1716.000	2.000	60.000	3.000	3.000	ISA	MI	2.000	1.128
333.000	6.000	763.000	1.000	45.000	6.000	3.000	ISA	GA	0.000	-0.686
342.000	5.000	1170.000	2.000	27.000	5.000	3.000	CON	AF	0.000	0.088
344.000	6.000	2030.000	2.000	15.000	3.000	3.000	CON	RW	3.000	1.725
351.000	4.000	620.000	2.000	43.000	5.000	3.000	DOT	MI	-1.000	-0.959
353.000	4.000	2215.000	2.000	40.000	4.000	3.000	DOT	GA	0.000	2.077
412.000	2.000	561.000	1.000	53.000	2.000	4.000	CHO	AF	0.000	-1.071
414.000	1.000	1568.000	2.000	46.000	1.000	4.000	CHO	RW	0.000	0.846
421.000	2.000	595.000	4.000	39.000	4.000	4.000	NOM	MI	-2.000	-1.006
423.000	3.000	1130.000	2.000	13.000	4.000	4.000	NOM	GA	-1.000	0.012
432.000	1.000	1164.000	1.000	17.000	1.000	4.000	ISA	AF	0.000	0.077
434.000	1.000	933.000	2.000	29.000	1.000	4.000	ISA	RW	0.000	-0.363
441.000	2.000	418.000	1.000	57.000	2.000	4.000	CON	MI	0.000	-1.343
443.000	3.000	504.000	1.000	31.000	3.000	4.000	CON	GA	0.000	-1.179
452.000	2.000	1075.000	2.000	26.000	2.000	4.000	DOT	AF	0.000	-0.093
454.000	1.000	440.000	2.000	56.000	1.000	4.000	DOT	RW	0.000	-1.301
511.000	1.000	1673.000	3.000	42.000	1.000	5.000	CHO	MI	0.000	1.046
513.000	1.000	1009.000	2.000	11.000	1.000	5.000	CHO	GA	0.000	-0.218
522.000	1.000	1044.000	2.000	44.000	2.000	5.000	NOM	AF	-1.000	-0.152
524.000	2.000	493.000	2.000	33.000	1.000	5.000	NOM	RW	1.000	-1.200
531.000	1.000	1067.000	2.000	3.000	1.000	5.000	ISA	MI	0.000	-0.108
533.000	1.000	733.000	2.000	25.000	1.000	5.000	ISA	GA	0.000	-0.744
542.000	2.000	2019.000	2.000	10.000	2.000	5.000	CON	AF	0.000	1.704
544.000	2.000	1302.000	1.000	2.000	1.000	5.000	CON	RW	1.000	0.339
551.000	1.000	1237.000	2.000	32.000	1.000	5.000	DOT	MI	0.000	0.216
553.000	2.000	1365.000	2.000	20.000	1.000	5.000	DOT	GA	1.000	0.459

Table C.1 (continued) - Subject 117

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	6.000	867.000	2.000	24.000	7.000	1.000	CHO	MI	-1.000	-0.454
113.000	8.000	1629.000	2.000	33.000	6.000	1.000	CHO	GA	2.000	0.644
122.000	2.000	1033.000	1.000	11.000	3.000	1.000	NOM	AF	-1.000	-0.214
124.000	5.000	770.000	2.000	55.000	4.000	1.000	NOM	RW	1.000	-0.593
131.000	6.000	835.000	2.000	35.000	6.000	1.000	ISA	MI	0.000	-0.500
133.000	4.000	2298.000	2.000	22.000	3.000	1.000	ISA	GA	1.000	1.608
142.000	2.000	1131.000	1.000	5.000	3.000	1.000	CON	AF	-1.000	-0.073
144.000	5.000	1631.000	2.000	25.000	4.000	1.000	CON	RW	1.000	0.647
151.000	5.000	1033.000	3.000	46.000	8.000	1.000	DOT	MI	-3.000	-0.214
153.000	7.000	1226.000	3.000	59.000	1.000	1.000	DOT	GA	6.000	0.064
212.100	3.000	465.000	1.000	26.000	3.000	2.100	CHO	AF	0.000	-1.033
212.200	1.000	934.000	1.000	48.000	1.000	2.200	CHO	AF	0.000	-0.357
214.100	5.000	748.000	1.000	19.000	5.000	2.100	CHO	RW	0.000	-0.625
214.200	1.000	4253.000	2.000	8.000	1.000	2.200	CHO	RW	0.000	4.425
221.100	6.000	1377.000	1.000	13.000	6.000	2.100	NOM	MI	0.000	0.281
221.200	7.000	2008.000	1.000	21.000	2.000	2.200	NOM	MI	5.000	1.190
223.100	6.000	893.000	2.000	57.000	6.000	2.100	NOM	GA	0.000	-0.416
223.200	3.000	1481.000	1.000	10.000	3.000	2.200	NOM	GA	0.000	0.431
232.100	3.000	942.000	1.000	6.000	3.000	2.100	ISA	AF	0.000	-0.346
232.200	1.000	1593.000	1.000	58.000	1.000	2.200	ISA	AF	0.000	0.592
234.100	5.000	621.000	1.000	18.000	5.000	2.100	ISA	RW	0.000	-0.808
234.200	6.000	1736.000	1.000	3.000	1.000	2.200	ISA	RW	5.000	0.798
241.100	2.000	677.000	1.000	28.000	2.000	2.100	CON	MI	0.000	-0.727
241.200	4.000	1428.000	2.000	60.000	2.000	2.200	CON	MI	2.000	0.355
243.100	5.000	1057.000	2.000	40.000	5.000	2.100	CON	GA	0.000	-0.180
243.200	3.000	2204.000	2.000	29.000	3.000	2.200	CON	GA	0.000	1.473
252.100	3.000	274.000	1.000	39.000	3.000	2.100	DOT	AF	0.000	-1.308
252.200	1.000	1009.000	1.000	12.000	1.000	2.200	DOT	AF	0.000	-0.249
254.100	5.000	760.000	1.000	30.000	5.000	2.100	DOT	RW	0.000	-0.608
254.200	6.000	1682.000	3.000	52.000	1.000	2.200	DOT	RW	5.000	0.721
311.000	3.000	1437.000	2.000	51.000	1.000	3.000	CHO	MI	2.000	0.368
313.000	4.000	641.000	2.000	47.000	4.000	3.000	CHO	GA	0.000	-0.779
322.000	4.000	1315.000	1.000	56.000	1.000	3.000	NOM	AF	3.000	0.192
324.000	4.000	723.000	1.000	43.000	4.000	3.000	NOM	RW	0.000	-0.661
331.000	3.000	576.000	1.000	49.000	3.000	3.000	ISA	MI	0.000	-0.873
333.000	6.000	652.000	1.000	45.000	6.000	3.000	ISA	GA	0.000	-0.763
342.000	5.000	2901.000	2.000	1.000	5.000	3.000	CON	AF	0.000	2.477
344.000	3.000	1042.000	1.000	44.000	3.000	3.000	CON	RW	0.000	-0.202
351.000	4.000	1999.000	1.000	32.000	5.000	3.000	DOT	MI	-1.000	1.177
353.000	4.000	848.000	2.000	9.000	4.000	3.000	DOT	GA	0.000	-0.481
412.000	2.000	405.000	1.000	53.000	2.000	4.000	CHO	AF	0.000	-1.119
414.000	1.000	1330.000	1.000	31.000	1.000	4.000	CHO	RW	0.000	0.213
421.000	4.000	305.000	1.000	50.000	4.000	4.000	NOM	MI	0.000	-1.263
423.000	4.000	1713.000	1.000	15.000	4.000	4.000	NOM	GA	0.000	0.765
432.000	1.000	555.000	1.000	42.000	1.000	4.000	ISA	AF	0.000	-0.903
434.000	1.000	613.000	1.000	54.000	1.000	4.000	ISA	RW	0.000	-0.820
441.000	2.000	386.000	1.000	38.000	2.000	4.000	CON	MI	0.000	-1.147
443.000	3.000	840.000	1.000	23.000	3.000	4.000	CON	GA	0.000	-0.493
452.000	2.000	775.000	1.000	7.000	2.000	4.000	DOT	AF	0.000	-0.586
454.000	1.000	1905.000	2.000	2.000	1.000	4.000	DOT	RW	0.000	1.042
511.000	1.000	1673.000	2.000	4.000	1.000	5.000	CHO	MI	0.000	0.708
513.000	1.000	1639.000	1.000	27.000	1.000	5.000	CHO	GA	0.000	0.659
522.000	2.000	2292.000	2.000	37.000	2.000	5.000	NOM	AF	0.000	1.599
524.000	2.000	832.000	1.000	34.000	1.000	5.000	NOM	RW	1.000	-0.504
531.000	1.000	870.000	1.000	14.000	1.000	5.000	ISA	MI	0.000	-0.449
533.000	1.000	1236.000	1.000	16.000	1.000	5.000	ISA	GA	0.000	0.078
542.000	2.000	903.000	1.000	17.000	2.000	5.000	CON	AF	0.000	-0.402
544.000	2.000	499.000	1.000	36.000	1.000	5.000	CON	RW	1.000	-0.984
551.000	1.000	808.000	1.000	20.000	1.000	5.000	DOT	MI	0.000	-0.539
553.000	3.000	604.000	1.000	41.000	1.000	5.000	DOT	GA	2.000	-0.833

Table C.1 (continued) - Subject 118

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	5.000	2221.000	2.000	23.000	7.000	1.000	CHO	MI	-2.000	1.187
113.000	4.000	690.000	2.000	59.000	6.000	1.000	CHO	GA	-2.000	-0.758
122.000	3.000	2400.000	2.000	3.000	3.000	1.000	NOM	AF	0.000	1.415
124.000	3.000	1046.000	2.000	12.000	4.000	1.000	NOM	RW	-1.000	-0.306
131.000	7.000	1831.000	2.000	26.000	6.000	1.000	ISA	MI	1.000	0.692
133.000	8.000	3230.000	1.000	30.000	3.000	1.000	ISA	GA	5.000	2.470
142.000	5.000	1236.000	3.000	53.000	3.000	1.000	CON	AF	2.000	-0.064
144.000	2.000	1527.000	1.000	45.000	4.000	1.000	CON	RW	-2.000	0.305
151.000	5.000	910.000	2.000	49.000	8.000	1.000	DOT	MI	-3.000	-0.479
153.000	6.000	1704.000	2.000	2.000	1.000	1.000	DOT	GA	5.000	0.530
212.100	3.000	614.000	1.000	10.000	3.000	2.100	CHO	AF	0.000	-0.855
212.200	1.000	1972.000	2.000	5.000	1.000	2.200	CHO	AF	0.000	0.871
214.100	5.000	939.000	1.000	29.000	5.000	2.100	CHO	RW	0.000	-0.442
214.200	1.000	979.000	2.000	36.000	1.000	2.200	CHO	RW	0.000	-0.391
221.100	6.000	771.000	1.000	54.000	6.000	2.100	NOM	MI	0.000	-0.655
221.200	2.000	639.000	1.000	47.000	2.000	2.200	NOM	MI	0.000	-0.823
223.100	6.000	1400.000	1.000	58.000	6.000	2.100	NOM	GA	0.000	0.144
223.200	3.000	1371.000	1.000	1.000	3.000	2.200	NOM	GA	0.000	0.107
232.100	3.000	743.000	1.000	6.000	3.000	2.100	ISA	AF	0.000	-0.691
232.200	1.000	714.000	1.000	33.000	1.000	2.200	ISA	AF	0.000	-0.728
234.100	5.000	872.000	1.000	21.000	5.000	2.100	ISA	RW	0.000	-0.527
234.200	4.000	4472.000	2.000	19.000	1.000	2.200	ISA	RW	3.000	4.048
241.100	2.000	1177.000	1.000	15.000	2.000	2.100	CON	MI	0.000	-0.139
241.200	2.000	707.000	1.000	39.000	2.000	2.200	CON	MI	0.000	-0.737
243.100	5.000	1858.000	1.000	35.000	5.000	2.100	CON	GA	0.000	0.726
243.200	8.000	997.000	1.000	22.000	3.000	2.200	CON	GA	5.000	-0.368
252.100	3.000	606.000	1.000	14.000	3.000	2.100	DOT	AF	0.000	-0.865
252.200	1.000	513.000	1.000	38.000	1.000	2.200	DOT	AF	0.000	-0.983
254.100	5.000	853.000	1.000	7.000	5.000	2.100	DOT	RW	0.000	-0.551
254.200	4.000	2588.000	2.000	8.000	1.000	2.200	DOT	RW	3.000	1.654
311.000	1.000	1483.000	2.000	42.000	1.000	3.000	CHO	MI	0.000	0.249
313.000	4.000	2125.000	1.000	9.000	4.000	3.000	CHO	GA	0.000	1.065
322.000	3.000	383.000	1.000	60.000	1.000	3.000	NOM	AF	2.000	-1.149
324.000	4.000	775.000	1.000	25.000	4.000	3.000	NOM	RW	0.000	-0.650
331.000	3.000	1378.000	1.000	24.000	3.000	3.000	ISA	MI	0.000	0.116
333.000	5.000	783.000	4.000	56.000	6.000	3.000	ISA	GA	-1.000	-0.640
342.000	5.000	2846.000	2.000	13.000	5.000	3.000	CON	AF	0.000	1.982
344.000	3.000	1360.000	1.000	20.000	3.000	3.000	CON	RW	0.000	0.093
351.000	5.000	1083.000	1.000	43.000	5.000	3.000	DOT	MI	0.000	-0.259
353.000	4.000	2683.000	2.000	16.000	4.000	3.000	DOT	GA	0.000	1.774
412.000	2.000	529.000	1.000	52.000	2.000	4.000	CHO	AF	0.000	-0.963
414.000	1.000	1925.000	1.000	4.000	1.000	4.000	CHO	RW	0.000	0.811
421.000	4.000	561.000	1.000	51.000	4.000	4.000	NOM	MI	0.000	-0.922
423.000	4.000	577.000	1.000	31.000	4.000	4.000	NOM	GA	0.000	-0.902
432.000	1.000	1156.000	2.000	41.000	1.000	4.000	ISA	AF	0.000	-0.166
434.000	1.000	768.000	1.000	11.000	1.000	4.000	ISA	RW	0.000	-0.659
441.000	2.000	1023.000	1.000	17.000	2.000	4.000	CON	MI	0.000	-0.335
443.000	3.000	1345.000	1.000	28.000	3.000	4.000	CON	GA	0.000	0.074
452.000	2.000	1239.000	2.000	57.000	2.000	4.000	DOT	AF	0.000	-0.061
454.000	4.000	703.000	1.000	32.000	1.000	4.000	DOT	RW	3.000	-0.742
511.000	1.000	1214.000	1.000	27.000	1.000	5.000	CHO	MI	0.000	-0.092
513.000	1.000	474.000	2.000	48.000	1.000	5.000	CHO	GA	0.000	-1.033
522.000	1.000	1034.000	1.000	34.000	2.000	5.000	NOM	AF	-1.000	-0.321
524.000	2.000	634.000	1.000	46.000	1.000	5.000	NOM	RW	1.000	-0.830
531.000	1.000	758.000	2.000	44.000	1.000	5.000	ISA	MI	0.000	-0.672
533.000	1.000	1470.000	2.000	55.000	1.000	5.000	ISA	GA	0.000	0.233
542.000	2.000	473.000	1.000	40.000	2.000	5.000	CON	AF	0.000	-1.034
544.000	2.000	1354.000	2.000	37.000	1.000	5.000	CON	RW	1.000	0.085
551.000	1.000	942.000	1.000	50.000	1.000	5.000	DOT	MI	0.000	-0.438
553.000	1.000	2547.000	1.000	18.000	1.000	5.000	DOT	GA	0.000	1.602

Table C.1 (continued) - Subject 119

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	6.000	1200.000	3.000	34.000	7.000	1.000	CHO	MI	-1.000	-0.615
113.000	8.000	2139.000	2.000	20.000	6.000	1.000	CHO	GA	2.000	0.610
122.000	4.000	2027.000	2.000	1.000	3.000	1.000	NOM	AF	1.000	0.464
124.000	3.000	1445.000	3.000	41.000	4.000	1.000	NOM	RW	-1.000	-0.295
131.000	6.000	1427.000	1.000	21.000	6.000	1.000	ISA	MI	0.000	-0.319
133.000	5.000	729.000	4.000	55.000	3.000	1.000	ISA	GA	2.000	-1.230
142.000	4.000	1621.000	3.000	59.000	3.000	1.000	CON	AF	1.000	-0.066
144.000	5.000	1531.000	4.000	17.000	4.000	1.000	CON	RW	1.000	-0.183
151.000	8.000	761.000	2.000	52.000	8.000	1.000	DOT	MI	0.000	-1.188
153.000	4.000	1406.000	2.000	30.000	1.000	1.000	DOT	GA	3.000	-0.346
212.100	3.000	1044.000	1.000	24.000	3.000	2.100	CHO	AF	0.000	-0.819
212.200	4.000	2336.000	1.000	9.000	1.000	2.200	CHO	AF	3.000	0.867
214.100	5.000	1994.000	1.000	15.000	5.000	2.100	CHO	RW	0.000	0.421
214.200	4.000	1727.000	2.000	48.000	1.000	2.200	CHO	RW	3.000	0.073
221.100	6.000	1233.000	1.000	14.000	6.000	2.100	NOM	MI	0.000	-0.572
221.200	7.000	1127.000	2.000	47.000	2.000	2.200	NOM	MI	5.000	-0.710
223.100	6.000	1230.000	1.000	51.000	6.000	2.100	NOM	GA	0.000	-0.576
223.200	3.000	1060.000	2.000	50.000	3.000	2.200	NOM	GA	0.000	-0.798
232.100	3.000	2557.000	2.000	7.000	3.000	2.100	ISA	AF	0.000	1.156
232.200	1.000	1871.000	1.000	3.000	1.000	2.200	ISA	AF	0.000	0.260
234.100	5.000	2002.000	1.000	26.000	5.000	2.100	ISA	RW	0.000	0.431
234.200	1.000	3397.000	2.000	40.000	1.000	2.200	ISA	RW	0.000	2.251
241.100	6.000	868.000	2.000	25.000	2.000	2.100	CON	MI	4.000	-1.048
241.200	2.000	3216.000	2.000	6.000	2.000	2.200	CON	MI	0.000	2.015
243.100	5.000	2273.000	3.000	35.000	5.000	2.100	CON	GA	0.000	0.785
243.200	3.000	2068.000	2.000	42.000	3.000	2.200	CON	GA	0.000	0.517
252.100	3.000	1461.000	1.000	2.000	3.000	2.100	DOT	AF	0.000	-0.274
252.200	1.000	2309.000	2.000	33.000	1.000	2.200	DOT	AF	0.000	0.832
254.100	5.000	780.000	2.000	46.000	5.000	2.100	DOT	RW	0.000	-1.163
254.200	1.000	1520.000	1.000	54.000	1.000	2.200	DOT	RW	0.000	-0.198
311.000	1.000	2565.000	2.000	23.000	1.000	3.000	CHO	MI	0.000	1.166
313.000	3.000	4214.000	2.000	38.000	4.000	3.000	CHO	GA	-1.000	3.317
322.000	4.000	1174.000	1.000	53.000	1.000	3.000	NOM	AF	3.000	-0.649
324.000	2.000	1634.000	2.000	32.000	4.000	3.000	NOM	RW	-2.000	-0.049
331.000	5.000	3644.000	2.000	18.000	3.000	3.000	ISA	MI	2.000	2.574
333.000	3.000	1995.000	2.000	11.000	6.000	3.000	ISA	GA	-3.000	0.422
342.000	5.000	1857.000	3.000	8.000	5.000	3.000	CON	AF	0.000	0.242
344.000	3.000	2505.000	3.000	58.000	3.000	3.000	CON	RW	0.000	1.088
351.000	2.000	1434.000	4.000	10.000	5.000	3.000	DOT	MI	-3.000	-0.310
353.000	5.000	1010.000	3.000	57.000	4.000	3.000	DOT	GA	1.000	-0.863
412.000	2.000	1485.000	1.000	45.000	2.000	4.000	CHO	AF	0.000	-0.243
414.000	2.000	1201.000	4.000	31.000	1.000	4.000	CHO	RW	1.000	-0.614
421.000	4.000	851.000	1.000	22.000	4.000	4.000	NOM	MI	0.000	-1.070
423.000	4.000	511.000	2.000	44.000	4.000	4.000	NOM	GA	0.000	-1.514
432.000	1.000	1544.000	2.000	43.000	1.000	4.000	ISA	AF	0.000	-0.166
434.000	1.000	1253.000	1.000	28.000	1.000	4.000	ISA	RW	0.000	-0.546
441.000	2.000	856.000	2.000	39.000	2.000	4.000	CON	MI	0.000	-1.064
443.000	3.000	1182.000	1.000	16.000	3.000	4.000	CON	GA	0.000	-0.639
452.000	2.000	2232.000	2.000	56.000	2.000	4.000	DOT	AF	0.000	0.731
454.000	4.000	1712.000	4.000	13.000	1.000	4.000	DOT	RW	3.000	0.053
511.000	2.000	602.000	1.000	19.000	1.000	5.000	CHO	MI	1.000	-1.395
513.000	1.000	720.000	1.000	4.000	1.000	5.000	CHO	GA	0.000	-1.241
522.000	1.000	2283.000	2.000	36.000	2.000	5.000	NOM	AF	-1.000	0.798
524.000	2.000	1496.000	2.000	37.000	1.000	5.000	NOM	RW	1.000	-0.229
531.000	1.000	2518.000	2.000	49.000	1.000	5.000	ISA	MI	0.000	1.105
533.000	1.000	661.000	1.000	60.000	1.000	5.000	ISA	GA	0.000	-1.318
542.000	2.000	974.000	2.000	29.000	2.000	5.000	CON	AF	0.000	-0.910
544.000	2.000	1902.000	2.000	5.000	1.000	5.000	CON	RW	1.000	0.301
551.000	1.000	2210.000	2.000	27.000	1.000	5.000	DOT	MI	0.000	0.703
553.000	2.000	1699.000	3.000	12.000	1.000	5.000	DOT	GA	1.000	0.036

Table C.1 (continued) - Subject 120

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	6.000	646.000	2.000	47.000	7.000	1.000	CHO	MI	-1.000	-0.349
113.000	5.000	1254.000	3.000	38.000	6.000	1.000	CHO	GA	-1.000	1.701
122.000	3.000	543.000	2.000	51.000	3.000	1.000	NOM	AF	0.000	-0.696
124.000	4.000	695.000	2.000	26.000	4.000	1.000	NOM	RW	0.000	-0.184
131.000	5.000	775.000	2.000	8.000	6.000	1.000	ISA	MI	-1.000	0.086
133.000	7.000	1448.000	3.000	24.000	3.000	1.000	ISA	GA	4.000	2.355
142.000	1.000	1347.000	1.000	2.000	3.000	1.000	CON	AF	-2.000	2.015
151.000	8.000	676.000	2.000	32.000	8.000	1.000	DOT	MI	0.000	-0.248
153.000	7.000	749.000	2.000	28.000	1.000	1.000	DOT	GA	6.000	-0.002
212.100	3.000	671.000	1.000	3.000	3.000	2.100	CHO	AF	0.000	-0.265
212.200	5.000	628.000	2.000	18.000	1.000	2.200	CHO	AF	4.000	-0.410
221.100	2.000	716.000	2.000	17.000	6.000	2.100	NOM	MI	-4.000	-0.113
221.200	2.000	1016.000	2.000	36.000	2.000	2.200	NOM	MI	0.000	0.899
223.100	2.000	852.000	1.000	27.000	6.000	2.100	NOM	GA	-4.000	0.346
223.200	3.000	529.000	1.000	16.000	3.000	2.200	NOM	GA	0.000	-0.744
232.100	3.000	381.000	1.000	59.000	3.000	2.100	ISA	AF	0.000	-1.243
232.200	5.000	561.000	2.000	37.000	1.000	2.200	ISA	AF	4.000	-0.636
241.100	2.000	692.000	1.000	7.000	2.000	2.100	CON	MI	0.000	-0.194
241.200	2.000	784.000	3.000	53.000	2.000	2.200	CON	MI	0.000	0.116
243.100	2.000	601.000	1.000	10.000	5.000	2.100	CON	GA	-3.000	-0.501
243.200	6.000	788.000	2.000	57.000	3.000	2.200	CON	GA	3.000	0.130
252.100	3.000	520.000	1.000	31.000	3.000	2.100	DOT	AF	0.000	-0.774
252.200	1.000	680.000	2.000	39.000	1.000	2.200	DOT	AF	0.000	-0.234
254.100	5.000	512.000	2.000	14.000	5.000	2.100	DOT	RW	0.000	-0.801
254.200	6.000	1138.000	2.000	6.000	1.000	2.200	DOT	RW	5.000	1.310
311.000	4.000	919.000	3.000	20.000	1.000	3.000	CHO	MI	3.000	0.571
313.000	5.000	670.000	2.000	19.000	4.000	3.000	CHO	GA	1.000	-0.268
322.000	1.000	1297.000	2.000	5.000	1.000	3.000	NOM	AF	0.000	1.846
324.000	4.000	702.000	2.000	12.000	4.000	3.000	NOM	RW	0.000	-0.160
331.000	3.000	1510.000	3.000	15.000	3.000	3.000	ISA	MI	0.000	2.564
333.000	6.000	1032.000	2.000	29.000	6.000	3.000	ISA	GA	0.000	0.953
342.000	5.000	1307.000	3.000	9.000	5.000	3.000	CON	AF	0.000	1.880
351.000	5.000	803.000	2.000	42.000	5.000	3.000	DOT	MI	0.000	0.180
353.000	2.000	1357.000	2.000	1.000	4.000	3.000	DOT	GA	-2.000	2.048
412.000	2.000	485.000	1.000	56.000	2.000	4.000	CHO	AF	0.000	-0.892
421.000	4.000	657.000	1.000	40.000	4.000	4.000	NOM	MI	0.000	-0.312
423.000	4.000	724.000	1.000	54.000	4.000	4.000	NOM	GA	0.000	-0.086
432.000	1.000	479.000	1.000	13.000	1.000	4.000	ISA	AF	0.000	-0.912
441.000	2.000	513.000	1.000	41.000	2.000	4.000	CON	MI	0.000	-0.797
443.000	3.000	338.000	1.000	48.000	3.000	4.000	CON	GA	0.000	-1.388
452.000	2.000	454.000	2.000	45.000	2.000	4.000	DOT	AF	0.000	-0.996
454.000	4.000	524.000	3.000	52.000	1.000	4.000	DOT	RW	3.000	-0.760
511.000	1.000	512.000	1.000	60.000	1.000	5.000	CHO	MI	0.000	-0.801
513.000	1.000	506.000	1.000	49.000	1.000	5.000	CHO	GA	0.000	-0.821
522.000	3.000	738.000	2.000	22.000	2.000	5.000	NOM	AF	1.000	-0.039
524.000	2.000	534.000	2.000	44.000	1.000	5.000	NOM	RW	1.000	-0.727
531.000	1.000	753.000	1.000	11.000	1.000	5.000	ISA	MI	0.000	0.012
533.000	1.000	796.000	2.000	35.000	1.000	5.000	ISA	GA	0.000	0.157
542.000	2.000	392.000	1.000	50.000	2.000	5.000	CON	AF	0.000	-1.205
551.000	1.000	412.000	2.000	55.000	1.000	5.000	DOT	MI	0.000	-1.138
553.000	1.000	609.000	2.000	34.000	1.000	5.000	DOT	GA	0.000	-0.474

Table C.1 (continued) - Subject 121

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	4.000	906.000	3.000	17.000	7.000	1.000	CHO	MI	-3.000	0.230
113.000	6.000	1347.000	2.000	45.000	6.000	1.000	CHO	GA	0.000	1.459
122.000	2.000	946.000	2.000	16.000	3.000	1.000	NOM	AF	-1.000	0.341
124.000	4.000	659.000	2.000	50.000	4.000	1.000	NOM	RW	0.000	-0.458
131.000	5.000	831.000	2.000	3.000	6.000	1.000	ISA	MI	-1.000	0.021
133.000	4.000	717.000	2.000	18.000	3.000	1.000	ISA	GA	1.000	-0.297
142.000	1.000	873.000	1.000	1.000	3.000	1.000	CON	AF	-2.000	0.138
151.000	4.000	926.000	2.000	58.000	8.000	1.000	DOT	MI	-4.000	0.286
153.000	6.000	968.000	2.000	5.000	1.000	1.000	DOT	GA	5.000	0.403
212.100	3.000	463.000	2.000	47.000	3.000	2.100	CHO	AF	0.000	-1.005
212.200	1.000	984.000	1.000	7.000	1.000	2.200	CHO	AF	0.000	0.447
221.100	6.000	616.000	1.000	55.000	6.000	2.100	NOM	MI	0.000	-0.578
221.200	2.000	783.000	3.000	15.000	2.000	2.200	NOM	MI	0.000	-0.113
223.100	2.000	1546.000	2.000	14.000	6.000	2.100	NOM	GA	-4.000	2.014
223.200	3.000	694.000	1.000	51.000	3.000	2.200	NOM	GA	0.000	-0.361
232.100	3.000	617.000	1.000	34.000	3.000	2.100	ISA	AF	0.000	-0.576
232.200	1.000	713.000	2.000	46.000	1.000	2.200	ISA	AF	0.000	-0.308
241.100	2.000	416.000	1.000	41.000	2.000	2.100	CON	MI	0.000	-1.136
241.200	2.000	426.000	1.000	30.000	2.000	2.200	CON	MI	0.000	-1.108
243.100	5.000	907.000	2.000	32.000	5.000	2.100	CON	GA	0.000	0.233
243.200	3.000	1488.000	3.000	57.000	3.000	2.200	CON	GA	0.000	1.852
252.100	3.000	440.000	1.000	60.000	3.000	2.100	DOT	AF	0.000	-1.069
252.200	1.000	526.000	1.000	27.000	1.000	2.200	DOT	AF	0.000	-0.829
254.100	5.000	518.000	1.000	35.000	5.000	2.100	DOT	RW	0.000	-0.851
254.200	8.000	993.000	1.000	42.000	1.000	2.200	DOT	RW	7.000	0.472
311.000	1.000	1084.000	1.000	43.000	1.000	3.000	CHO	MI	0.000	0.726
313.000	4.000	746.000	1.000	22.000	4.000	3.000	CHO	GA	0.000	-0.216
322.000	1.000	712.000	1.000	40.000	1.000	3.000	NOM	AF	0.000	-0.311
324.000	4.000	663.000	1.000	36.000	4.000	3.000	NOM	RW	0.000	-0.447
331.000	3.000	2434.000	2.000	4.000	3.000	3.000	ISA	MI	0.000	4.488
333.000	6.000	1068.000	2.000	49.000	6.000	3.000	ISA	GA	0.000	0.681
342.000	5.000	1230.000	1.000	21.000	5.000	3.000	CON	AF	0.000	1.133
351.000	2.000	889.000	1.000	54.000	5.000	3.000	DOT	MI	-3.000	0.183
353.000	5.000	1342.000	3.000	20.000	4.000	3.000	DOT	GA	1.000	1.445
412.000	2.000	698.000	1.000	48.000	2.000	4.000	CHO	AF	0.000	-0.350
421.000	4.000	483.000	1.000	53.000	4.000	4.000	NOM	MI	0.000	-0.949
423.000	4.000	711.000	1.000	6.000	4.000	4.000	NOM	GA	0.000	-0.314
432.000	1.000	506.000	1.000	44.000	1.000	4.000	ISA	AF	0.000	-0.885
441.000	2.000	430.000	1.000	19.000	2.000	4.000	CON	MI	0.000	-1.097
443.000	3.000	465.000	2.000	26.000	3.000	4.000	CON	GA	0.000	-0.999
452.000	2.000	767.000	2.000	38.000	2.000	4.000	DOT	AF	0.000	-0.157
454.000	2.000	800.000	3.000	39.000	1.000	4.000	DOT	RW	1.000	-0.066
511.000	1.000	1231.000	2.000	29.000	1.000	5.000	CHO	MI	0.000	1.136
513.000	1.000	563.000	1.000	28.000	1.000	5.000	CHO	GA	0.000	-0.726
522.000	1.000	526.000	1.000	56.000	2.000	5.000	NOM	AF	-1.000	-0.829
524.000	2.000	708.000	1.000	23.000	1.000	5.000	NOM	RW	1.000	-0.322
531.000	1.000	846.000	1.000	24.000	1.000	5.000	ISA	MI	0.000	0.063
533.000	1.000	645.000	1.000	13.000	1.000	5.000	ISA	GA	0.000	-0.498
542.000	2.000	703.000	1.000	11.000	2.000	5.000	CON	AF	0.000	-0.336
551.000	1.000	670.000	1.000	8.000	1.000	5.000	DOT	MI	0.000	-0.428
553.000	3.000	776.000	3.000	52.000	1.000	5.000	DOT	GA	2.000	-0.132

Table C.1 (continued) - Subject 122

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	6.000	1354.000	2.000	5.000	7.000	1.000	CHO	MI	-1.000	-0.209
113.000	6.000	3332.000	2.000	46.000	6.000	1.000	CHO	GA	0.000	1.593
122.000	5.000	849.000	1.000	49.000	3.000	1.000	NOM	AF	2.000	-0.668
124.000	3.000	764.000	2.000	7.000	4.000	1.000	NOM	RW	-1.000	-0.746
131.000	5.000	836.000	2.000	43.000	6.000	1.000	ISA	MI	-1.000	-0.680
133.000	1.000	3244.000	2.000	32.000	3.000	1.000	ISA	GA	-2.000	1.513
142.000	4.000	3624.000	2.000	33.000	3.000	1.000	CON	AF	1.000	1.859
144.000	4.000	1896.000	2.000	3.000	4.000	1.000	CON	RW	0.000	0.285
151.000	8.000	2817.000	2.000	52.000	8.000	1.000	DOT	MI	0.000	1.124
153.000	4.000	2914.000	2.000	34.000	1.000	1.000	DOT	GA	3.000	1.212
212.100	3.000	553.000	1.000	60.000	3.000	2.100	CHO	AF	0.000	-0.938
212.200	4.000	1179.000	1.000	36.000	1.000	2.200	CHO	AF	3.000	-0.368
214.100	5.000	572.000	1.000	15.000	5.000	2.100	CHO	RW	0.000	-0.921
214.200	1.000	2096.000	1.000	28.000	1.000	2.200	CHO	RW	0.000	0.467
221.100	6.000	1353.000	1.000	35.000	6.000	2.100	NOM	MI	0.000	-0.209
221.200	2.000	1161.000	1.000	23.000	2.000	2.200	NOM	MI	0.000	-0.384
223.100	6.000	1127.000	1.000	39.000	6.000	2.100	NOM	GA	0.000	-0.415
223.200	3.000	750.000	1.000	14.000	3.000	2.200	NOM	GA	0.000	-0.759
232.100	3.000	780.000	1.000	2.000	3.000	2.100	ISA	AF	0.000	-0.731
232.200	4.000	803.000	1.000	45.000	1.000	2.200	ISA	AF	3.000	-0.710
234.100	5.000	528.000	1.000	56.000	5.000	2.100	ISA	RW	0.000	-0.961
234.200	1.000	2178.000	1.000	38.000	1.000	2.200	ISA	RW	0.000	0.542
241.100	2.000	996.000	1.000	6.000	2.000	2.100	CON	MI	0.000	-0.535
241.200	2.000	2697.000	1.000	12.000	2.000	2.200	CON	MI	0.000	1.015
243.100	5.000	3793.000	2.000	13.000	5.000	2.100	CON	GA	0.000	2.013
243.200	3.000	1858.000	1.000	16.000	3.000	2.200	CON	GA	0.000	0.250
252.100	3.000	401.000	1.000	42.000	3.000	2.100	DOT	AF	0.000	-1.077
252.200	1.000	1427.000	1.000	11.000	1.000	2.200	DOT	AF	0.000	-0.142
254.100	5.000	1176.000	1.000	10.000	5.000	2.100	DOT	RW	0.000	-0.371
254.200	8.000	1179.000	1.000	57.000	1.000	2.200	DOT	RW	7.000	-0.368
311.000	1.000	2322.000	1.000	27.000	1.000	3.000	CHO	MI	0.000	0.673
313.000	3.000	1995.000	1.000	24.000	4.000	3.000	CHO	GA	-1.000	0.375
322.000	4.000	1099.000	1.000	50.000	1.000	3.000	NOM	AF	3.000	-0.441
324.000	2.000	1362.000	1.000	26.000	4.000	3.000	NOM	RW	-2.000	-0.201
331.000	3.000	671.000	1.000	40.000	3.000	3.000	ISA	MI	0.000	-0.831
333.000	3.000	1792.000	1.000	22.000	6.000	3.000	ISA	GA	-3.000	0.190
342.000	5.000	1576.000	1.000	8.000	5.000	3.000	CON	AF	0.000	-0.006
344.000	3.000	4773.000	1.000	1.000	3.000	3.000	CON	RW	0.000	2.905
351.000	2.000	2354.000	2.000	47.000	5.000	3.000	DOT	MI	-3.000	0.702
353.000	4.000	3171.000	2.000	21.000	4.000	3.000	DOT	GA	0.000	1.446
412.000	2.000	464.000	1.000	51.000	2.000	4.000	CHO	AF	0.000	-1.019
414.000	4.000	1728.000	2.000	55.000	1.000	4.000	CHO	RW	3.000	0.132
421.000	4.000	269.000	1.000	41.000	4.000	4.000	NOM	MI	0.000	-1.197
423.000	4.000	850.000	1.000	18.000	4.000	4.000	NOM	GA	0.000	-0.668
432.000	1.000	882.000	1.000	58.000	1.000	4.000	ISA	AF	0.000	-0.638
434.000	1.000	560.000	1.000	37.000	1.000	4.000	ISA	RW	0.000	-0.932
441.000	2.000	543.000	1.000	19.000	2.000	4.000	CON	MI	0.000	-0.947
443.000	3.000	446.000	1.000	48.000	3.000	4.000	CON	GA	0.000	-1.036
452.000	2.000	1817.000	1.000	25.000	2.000	4.000	DOT	AF	0.000	0.213
454.000	1.000	2454.000	2.000	30.000	1.000	4.000	DOT	RW	0.000	0.793
511.000	1.000	2043.000	2.000	4.000	1.000	5.000	CHO	MI	0.000	0.419
513.000	1.000	896.000	1.000	53.000	1.000	5.000	CHO	GA	0.000	-0.626
522.000	2.000	5413.000	2.000	17.000	2.000	5.000	NOM	AF	0.000	3.488
524.000	2.000	1375.000	1.000	20.000	1.000	5.000	NOM	RW	1.000	-0.189
531.000	1.000	1194.000	1.000	9.000	1.000	5.000	ISA	MI	0.000	-0.354
533.000	1.000	820.000	1.000	31.000	1.000	5.000	ISA	GA	0.000	-0.695
542.000	2.000	977.000	1.000	29.000	2.000	5.000	CON	AF	0.000	-0.552
544.000	2.000	945.000	1.000	44.000	1.000	5.000	CON	RW	1.000	-0.581
551.000	1.000	661.000	1.000	54.000	1.000	5.000	DOT	MI	0.000	-0.840
553.000	1.000	1289.000	2.000	59.000	1.000	5.000	DOT	GA	0.000	-0.268

Table C.1 (continued) - Subject 123

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	5.000	1334.000	2.000	21.000	7.000	1.000	CHO	MI	-2.000	0.480
113.000	7.000	1311.000	2.000	35.000	6.000	1.000	CHO	GA	1.000	0.437
122.000	4.000	1033.000	1.000	14.000	3.000	1.000	NOM	AF	1.000	-0.084
124.000	4.000	852.000	2.000	59.000	4.000	1.000	NOM	RW	0.000	-0.424
131.000	6.000	974.000	2.000	57.000	6.000	1.000	ISA	MI	0.000	-0.195
133.000	5.000	2298.000	2.000	12.000	3.000	1.000	ISA	GA	2.000	2.288
142.000	3.000	604.000	2.000	52.000	3.000	1.000	CON	AF	0.000	-0.889
144.000	4.000	671.000	3.000	39.000	4.000	1.000	CON	RW	0.000	-0.763
151.000	7.000	2181.000	2.000	11.000	8.000	1.000	DOT	MI	-1.000	2.069
153.000	3.000	1535.000	3.000	30.000	1.000	1.000	DOT	GA	2.000	0.857
212.100	3.000	627.000	1.000	58.000	3.000	2.100	CHO	AF	0.000	-0.846
212.200	1.000	1564.000	2.000	19.000	1.000	2.200	CHO	AF	0.000	0.912
214.100	5.000	558.000	1.000	41.000	5.000	2.100	CHO	RW	0.000	-0.975
214.200	6.000	716.000	2.000	45.000	1.000	2.200	CHO	RW	5.000	-0.679
221.100	6.000	508.000	1.000	56.000	6.000	2.100	NOM	MI	0.000	-1.069
221.200	7.000	972.000	2.000	32.000	2.000	2.200	NOM	MI	5.000	-0.199
223.100	6.000	741.000	1.000	16.000	6.000	2.100	NOM	GA	0.000	-0.632
223.200	3.000	1054.000	2.000	9.000	3.000	2.200	NOM	GA	0.000	-0.045
232.100	3.000	427.000	2.000	26.000	3.000	2.100	ISA	AF	0.000	-1.221
232.200	4.000	963.000	3.000	53.000	1.000	2.200	ISA	AF	3.000	-0.216
234.100	5.000	711.000	1.000	13.000	5.000	2.100	ISA	RW	0.000	-0.688
234.200	1.000	1152.000	2.000	48.000	1.000	2.200	ISA	RW	0.000	0.139
241.100	6.000	702.000	1.000	22.000	2.000	2.100	CON	MI	4.000	-0.705
241.200	7.000	634.000	2.000	43.000	2.000	2.200	CON	MI	5.000	-0.833
243.100	5.000	799.000	1.000	4.000	5.000	2.100	CON	GA	0.000	-0.523
243.200	8.000	1643.000	3.000	1.000	3.000	2.200	CON	GA	5.000	1.060
252.100	3.000	759.000	1.000	17.000	3.000	2.100	DOT	AF	0.000	-0.598
252.200	1.000	535.000	2.000	24.000	1.000	2.200	DOT	AF	0.000	-1.018
254.100	6.000	1099.000	1.000	46.000	5.000	2.100	DOT	RW	1.000	0.040
254.200	6.000	1121.000	2.000	33.000	1.000	2.200	DOT	RW	5.000	0.081
311.000	1.000	735.000	1.000	31.000	1.000	3.000	CHO	MI	0.000	-0.643
313.000	4.000	1723.000	3.000	5.000	4.000	3.000	CHO	GA	0.000	1.210
322.000	3.000	1708.000	2.000	28.000	1.000	3.000	NOM	AF	2.000	1.182
324.000	2.000	898.000	3.000	8.000	4.000	3.000	NOM	RW	-2.000	-0.337
331.000	3.000	2265.000	1.000	2.000	3.000	3.000	ISA	MI	0.000	2.226
333.000	6.000	2513.000	2.000	7.000	6.000	3.000	ISA	GA	0.000	2.691
342.000	5.000	519.000	1.000	60.000	5.000	3.000	CON	AF	0.000	-1.048
344.000	2.000	1373.000	2.000	34.000	3.000	3.000	CON	RW	-1.000	0.553
351.000	5.000	517.000	4.000	37.000	5.000	3.000	DOT	MI	0.000	-1.052
353.000	5.000	1373.000	4.000	36.000	4.000	3.000	DOT	GA	1.000	0.553
412.000	2.000	419.000	1.000	49.000	2.000	4.000	CHO	AF	0.000	-1.236
414.000	4.000	1828.000	2.000	38.000	1.000	4.000	CHO	RW	3.000	1.407
421.000	4.000	504.000	1.000	23.000	4.000	4.000	NOM	MI	0.000	-1.076
423.000	4.000	500.000	1.000	25.000	4.000	4.000	NOM	GA	0.000	-1.084
432.000	1.000	1263.000	1.000	18.000	1.000	4.000	ISA	AF	0.000	0.347
434.000	1.000	776.000	2.000	20.000	1.000	4.000	ISA	RW	0.000	-0.566
441.000	2.000	1112.000	1.000	6.000	2.000	4.000	CON	MI	0.000	0.064
443.000	3.000	284.000	1.000	42.000	3.000	4.000	CON	GA	0.000	-1.489
452.000	2.000	1000.000	4.000	50.000	2.000	4.000	DOT	AF	0.000	-0.146
454.000	4.000	436.000	2.000	55.000	1.000	4.000	DOT	RW	3.000	-1.204
511.000	1.000	2060.000	2.000	3.000	1.000	5.000	CHO	MI	0.000	1.842
513.000	1.000	1208.000	2.000	15.000	1.000	5.000	CHO	GA	0.000	0.244
522.000	2.000	1352.000	3.000	51.000	2.000	5.000	NOM	AF	0.000	0.514
524.000	2.000	1581.000	3.000	29.000	1.000	5.000	NOM	RW	1.000	0.943
531.000	1.000	1330.000	2.000	40.000	1.000	5.000	ISA	MI	0.000	0.473
533.000	2.000	1666.000	3.000	47.000	1.000	5.000	ISA	GA	1.000	1.103
542.000	2.000	1036.000	1.000	27.000	2.000	5.000	CON	AF	0.000	-0.079
544.000	2.000	1369.000	2.000	10.000	1.000	5.000	CON	RW	1.000	0.546
551.000	1.000	655.000	2.000	44.000	1.000	5.000	DOT	MI	0.000	-0.793
553.000	3.000	595.000	4.000	54.000	1.000	5.000	DOT	GA	2.000	-0.906

Table C.1 (continued) - Subject 124

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	6.000	1836.000	2.000	46.000	7.000	1.000	CHO	MI	-1.000	0.138
113.000	7.000	1907.000	2.000	33.000	6.000	1.000	CHO	GA	1.000	0.215
122.000	4.000	1964.000	2.000	17.000	3.000	1.000	NOM	AF	1.000	0.277
124.000	5.000	1844.000	2.000	52.000	4.000	1.000	NOM	RW	1.000	0.147
131.000	6.000	1150.000	2.000	24.000	6.000	1.000	ISA	MI	0.000	-0.606
133.000	3.000	1567.000	2.000	42.000	3.000	1.000	ISA	GA	0.000	-0.154
142.000	4.000	1511.000	2.000	31.000	3.000	1.000	CON	AF	1.000	-0.215
144.000	5.000	3498.000	2.000	15.000	4.000	1.000	CON	RW	1.000	1.941
151.000	6.000	1918.000	2.000	25.000	8.000	1.000	DOT	MI	-2.000	0.227
153.000	4.000	3832.000	3.000	26.000	1.000	1.000	DOT	GA	3.000	2.304
212.100	3.000	1562.000	2.000	19.000	3.000	2.100	CHO	AF	0.000	-0.159
212.200	4.000	621.000	1.000	20.000	1.000	2.200	CHO	AF	3.000	-1.180
214.100	5.000	1092.000	1.000	35.000	5.000	2.100	CHO	RW	0.000	-0.669
214.200	1.000	2450.000	2.000	21.000	1.000	2.200	CHO	RW	0.000	0.804
221.100	6.000	1543.000	1.000	10.000	6.000	2.100	NOM	MI	0.000	-0.180
221.200	2.000	2759.000	2.000	1.000	2.000	2.200	NOM	MI	0.000	1.139
223.100	6.000	814.000	1.000	57.000	6.000	2.100	NOM	GA	0.000	-0.971
223.200	3.000	1248.000	1.000	6.000	3.000	2.200	NOM	GA	0.000	-0.500
232.100	3.000	834.000	1.000	43.000	3.000	2.100	ISA	AF	0.000	-0.949
232.200	4.000	1904.000	1.000	5.000	1.000	2.200	ISA	AF	3.000	0.212
234.100	5.000	1368.000	1.000	4.000	5.000	2.100	ISA	RW	0.000	-0.370
234.200	1.000	4754.000	2.000	27.000	1.000	2.200	ISA	RW	0.000	3.304
241.100	2.000	1780.000	2.000	50.000	2.000	2.100	CON	MI	0.000	0.077
241.200	4.000	701.000	1.000	45.000	2.000	2.200	CON	MI	2.000	-1.093
243.100	5.000	2345.000	2.000	3.000	5.000	2.100	CON	GA	0.000	0.690
243.200	5.000	3157.000	3.000	53.000	3.000	2.200	CON	GA	2.000	1.571
252.100	3.000	1273.000	1.000	12.000	3.000	2.100	DOT	AF	0.000	-0.473
252.200	4.000	2012.000	2.000	40.000	1.000	2.200	DOT	AF	3.000	0.329
254.100	5.000	846.000	1.000	16.000	5.000	2.100	DOT	RW	0.000	-0.936
254.200	8.000	3081.000	1.000	9.000	1.000	2.200	DOT	RW	7.000	1.489
311.000	1.000	1630.000	2.000	29.000	1.000	3.000	CHO	MI	0.000	-0.085
313.000	4.000	1347.000	2.000	54.000	4.000	3.000	CHO	GA	0.000	-0.392
322.000	4.000	2111.000	1.000	8.000	1.000	3.000	NOM	AF	3.000	0.436
324.000	4.000	878.000	2.000	56.000	4.000	3.000	NOM	RW	0.000	-0.901
331.000	3.000	3016.000	1.000	18.000	3.000	3.000	ISA	MI	0.000	1.418
333.000	6.000	716.000	1.000	28.000	6.000	3.000	ISA	GA	0.000	-1.077
342.000	5.000	3105.000	3.000	36.000	5.000	3.000	CON	AF	0.000	1.515
344.000	3.000	484.000	1.000	47.000	3.000	3.000	CON	RW	0.000	-1.329
351.000	2.000	2175.000	2.000	22.000	5.000	3.000	DOT	MI	-3.000	0.506
353.000	4.000	2218.000	3.000	34.000	4.000	3.000	DOT	GA	0.000	0.553
412.000	2.000	414.000	1.000	41.000	2.000	4.000	CHO	AF	0.000	-1.405
414.000	2.000	1652.000	2.000	48.000	1.000	4.000	CHO	RW	1.000	-0.062
421.000	4.000	904.000	2.000	13.000	4.000	4.000	NOM	MI	0.000	-0.873
423.000	4.000	1291.000	1.000	7.000	4.000	4.000	NOM	GA	0.000	-0.453
432.000	1.000	677.000	2.000	55.000	1.000	4.000	ISA	AF	0.000	-1.119
434.000	1.000	768.000	1.000	38.000	1.000	4.000	ISA	RW	0.000	-1.021
441.000	2.000	1040.000	1.000	32.000	2.000	4.000	CON	MI	0.000	-0.726
443.000	3.000	1209.000	2.000	59.000	3.000	4.000	CON	GA	0.000	-0.542
452.000	2.000	933.000	2.000	58.000	2.000	4.000	DOT	AF	0.000	-0.842
454.000	2.000	1298.000	1.000	2.000	1.000	4.000	DOT	RW	1.000	-0.446
511.000	1.000	2514.000	2.000	11.000	1.000	5.000	CHO	MI	0.000	0.874
513.000	1.000	724.000	2.000	37.000	1.000	5.000	CHO	GA	0.000	-1.068
522.000	2.000	2101.000	2.000	60.000	2.000	5.000	NOM	AF	0.000	0.426
524.000	2.000	1614.000	2.000	23.000	1.000	5.000	NOM	RW	1.000	-0.103
531.000	1.000	1035.000	2.000	39.000	1.000	5.000	ISA	MI	0.000	-0.731
533.000	1.000	1716.000	1.000	14.000	1.000	5.000	ISA	GA	0.000	0.008
542.000	2.000	820.000	2.000	30.000	2.000	5.000	CON	AF	0.000	-0.964
544.000	2.000	1388.000	2.000	44.000	1.000	5.000	CON	RW	1.000	-0.348
551.000	1.000	3781.000	1.000	51.000	1.000	5.000	DOT	MI	0.000	2.248
553.000	3.000	1793.000	3.000	49.000	1.000	5.000	DOT	GA	2.000	0.091

Table C.1 (continued) - Subject 125 *

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	4.000	786.000	2.000	7.000	7.000	1.000	CHO	MI	-3.000	1.829
113.000	3.000	634.000	2.000	20.000	6.000	1.000	CHO	GA	-3.000	0.905
122.000	3.000	378.000	2.000	23.000	3.000	1.000	NOM	AF	0.000	-0.652
124.000	3.000	642.000	2.000	39.000	4.000	1.000	NOM	RW	-1.000	0.953
131.000	5.000	519.000	2.000	26.000	6.000	1.000	ISA	MI	-1.000	0.205
133.000	2.000	471.000	2.000	22.000	3.000	1.000	ISA	GA	-1.000	-0.087
142.000	2.000	514.000	2.000	34.000	3.000	1.000	CON	AF	-1.000	0.175
144.000	7.000	314.000	2.000	44.000	4.000	1.000	CON	RW	3.000	-1.042
151.000	6.000	413.000	2.000	46.000	8.000	1.000	DOT	MI	-2.000	-0.440
153.000	5.000	469.000	2.000	27.000	1.000	1.000	DOT	GA	4.000	-0.099
212.100	3.000	323.000	2.000	45.000	3.000	2.100	CHO	AF	0.000	-0.987
212.200	1.000	893.000	2.000	17.000	1.000	2.200	CHO	AF	0.000	2.480
214.100	5.000	375.000	2.000	48.000	5.000	2.100	CHO	RW	0.000	-0.671
214.200	6.000	216.000	2.000	52.000	1.000	2.200	CHO	RW	5.000	-1.638
221.100	6.000	527.000	3.000	42.000	6.000	2.100	NOM	MI	0.000	0.254
221.200	7.000	490.000	2.000	56.000	2.000	2.200	NOM	MI	5.000	0.029
223.100	6.000	512.000	3.000	43.000	6.000	2.100	NOM	GA	0.000	0.163
223.200	3.000	577.000	2.000	35.000	3.000	2.200	NOM	GA	0.000	0.558
232.100	3.000	304.000	2.000	60.000	3.000	2.100	ISA	AF	0.000	-1.103
232.200	1.000	372.000	2.000	18.000	1.000	2.200	ISA	AF	0.000	-0.689
234.100	5.000	237.000	2.000	50.000	5.000	2.100	ISA	RW	0.000	-1.510
234.200	6.000	696.000	2.000	41.000	1.000	2.200	ISA	RW	5.000	1.282
241.100	2.000	533.000	2.000	16.000	2.000	2.100	CON	MI	0.000	0.290
241.200	7.000	196.000	1.000	58.000	2.000	2.200	CON	MI	5.000	-1.760
243.100	2.000	520.000	2.000	24.000	5.000	2.100	CON	GA	-3.000	0.211
243.200	6.000	489.000	3.000	59.000	3.000	2.200	CON	GA	3.000	0.023
252.100	3.000	310.000	2.000	12.000	3.000	2.100	DOT	AF	0.000	-1.066
252.200	1.000	728.000	2.000	31.000	1.000	2.200	DOT	AF	0.000	1.477
254.100	5.000	365.000	2.000	30.000	5.000	2.100	DOT	RW	0.000	-0.732
254.200	6.000	475.000	2.000	25.000	1.000	2.200	DOT	RW	5.000	-0.062
311.000	3.000	360.000	2.000	19.000	1.000	3.000	CHO	MI	2.000	-0.762
313.000	4.000	228.000	2.000	49.000	4.000	3.000	CHO	GA	0.000	-1.565
322.000	5.000	473.000	1.000	36.000	1.000	3.000	NOM	AF	4.000	-0.075
324.000	2.000	512.000	2.000	11.000	4.000	3.000	NOM	RW	-2.000	0.163
331.000	3.000	531.000	2.000	10.000	3.000	3.000	ISA	MI	0.000	0.278
333.000	6.000	370.000	2.000	33.000	6.000	3.000	ISA	GA	0.000	-0.701
342.000	1.000	450.000	2.000	38.000	5.000	3.000	CON	AF	-4.000	-0.215
344.000	6.000	947.000	2.000	2.000	3.000	3.000	CON	RW	3.000	2.809
351.000	5.000	576.000	2.000	8.000	5.000	3.000	DOT	MI	0.000	0.552
353.000	5.000	531.000	3.000	54.000	4.000	3.000	DOT	GA	1.000	0.278
412.000	2.000	669.000	2.000	40.000	2.000	4.000	CHO	AF	0.000	1.118
414.000	2.000	677.000	2.000	55.000	1.000	4.000	CHO	RW	1.000	1.166
421.000	4.000	420.000	1.000	9.000	4.000	4.000	NOM	MI	0.000	-0.397
423.000	4.000	579.000	1.000	28.000	4.000	4.000	NOM	GA	0.000	0.570
432.000	1.000	251.000	2.000	53.000	1.000	4.000	ISA	AF	0.000	-1.425
434.000	1.000	608.000	2.000	4.000	1.000	4.000	ISA	RW	0.000	0.747
441.000	2.000	518.000	1.000	5.000	2.000	4.000	CON	MI	0.000	0.199
443.000	3.000	332.000	2.000	13.000	3.000	4.000	CON	GA	0.000	-0.932
452.000	2.000	790.000	2.000	1.000	2.000	4.000	DOT	AF	0.000	1.854
454.000	2.000	327.000	2.000	47.000	1.000	4.000	DOT	RW	1.000	-0.963
511.000	2.000	282.000	2.000	57.000	1.000	5.000	CHO	MI	1.000	-1.236
513.000	1.000	444.000	2.000	15.000	1.000	5.000	CHO	GA	0.000	-0.251
522.000	1.000	394.000	1.000	3.000	2.000	5.000	NOM	AF	-1.000	-0.555
524.000	2.000	417.000	2.000	37.000	1.000	5.000	NOM	RW	1.000	-0.415
531.000	1.000	476.000	2.000	51.000	1.000	5.000	ISA	MI	0.000	-0.056
533.000	1.000	388.000	1.000	29.000	1.000	5.000	ISA	GA	0.000	-0.592
542.000	2.000	626.000	2.000	6.000	2.000	5.000	CON	AF	0.000	0.856
544.000	2.000	363.000	2.000	21.000	1.000	5.000	CON	RW	1.000	-0.744
551.000	2.000	697.000	3.000	14.000	1.000	5.000	DOT	MI	1.000	1.288
553.000	3.000	602.000	2.000	32.000	1.000	5.000	DOT	GA	2.000	0.710

Table C.1 (continued) - Subject 126

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	7.000	677.000	2.000	47.000	7.000	1.000	CHO	MI	0.000	-0.654
113.000	8.000	905.000	2.000	37.000	6.000	1.000	CHO	GA	2.000	-0.063
122.000	2.000	804.000	1.000	56.000	3.000	1.000	NOM	AF	-1.000	-0.325
124.000	2.000	790.000	1.000	24.000	4.000	1.000	NOM	RW	-2.000	-0.361
131.000	7.000	754.000	2.000	18.000	6.000	1.000	ISA	MI	1.000	-0.455
133.000	7.000	965.000	2.000	54.000	3.000	1.000	ISA	GA	4.000	0.093
142.000	8.000	830.000	2.000	43.000	3.000	1.000	CON	AF	5.000	-0.257
144.000	6.000	1115.000	3.000	11.000	4.000	1.000	CON	RW	2.000	0.482
151.000	8.000	592.000	2.000	19.000	8.000	1.000	DOT	MI	0.000	-0.875
153.000	5.000	643.000	2.000	15.000	1.000	1.000	DOT	GA	4.000	-0.742
212.100	3.000	661.000	1.000	32.000	3.000	2.100	CHO	AF	0.000	-0.696
212.200	1.000	915.000	2.000	20.000	1.000	2.200	CHO	AF	0.000	-0.037
214.100	5.000	738.000	1.000	6.000	5.000	2.100	CHO	RW	0.000	-0.496
214.200	6.000	2663.000	2.000	25.000	1.000	2.200	CHO	RW	5.000	4.496
221.100	6.000	1099.000	4.000	23.000	6.000	2.100	NOM	MI	0.000	0.440
221.200	2.000	1021.000	1.000	13.000	2.000	2.200	NOM	MI	0.000	0.238
223.100	6.000	1061.000	4.000	28.000	6.000	2.100	NOM	GA	0.000	0.342
223.200	3.000	948.000	1.000	4.000	3.000	2.200	NOM	GA	0.000	0.049
232.100	3.000	663.000	1.000	39.000	3.000	2.100	ISA	AF	0.000	-0.691
232.200	1.000	780.000	2.000	51.000	1.000	2.200	ISA	AF	0.000	-0.387
234.100	5.000	772.000	1.000	16.000	5.000	2.100	ISA	RW	0.000	-0.408
234.200	4.000	1148.000	2.000	48.000	1.000	2.200	ISA	RW	3.000	0.567
241.100	2.000	1118.000	1.000	2.000	2.000	2.100	CON	MI	0.000	0.489
241.200	6.000	864.000	1.000	27.000	2.000	2.200	CON	MI	4.000	-0.169
243.100	5.000	1014.000	1.000	33.000	5.000	2.100	CON	GA	0.000	0.220
243.200	4.000	1518.000	2.000	31.000	3.000	2.200	CON	GA	1.000	1.527
252.100	3.000	590.000	1.000	3.000	3.000	2.100	DOT	AF	0.000	-0.880
252.200	1.000	891.000	1.000	36.000	1.000	2.200	DOT	AF	0.000	-0.099
254.100	5.000	851.000	1.000	21.000	5.000	2.100	DOT	RW	0.000	-0.203
254.200	1.000	717.000	2.000	53.000	1.000	2.200	DOT	RW	0.000	-0.550
311.000	3.000	934.000	2.000	8.000	1.000	3.000	CHO	MI	2.000	0.012
313.000	4.000	1341.000	2.000	57.000	4.000	3.000	CHO	GA	0.000	1.068
322.000	3.000	1427.000	2.000	41.000	1.000	3.000	NOM	AF	2.000	1.291
324.000	4.000	813.000	2.000	58.000	4.000	3.000	NOM	RW	0.000	-0.302
331.000	4.000	1129.000	2.000	45.000	3.000	3.000	ISA	MI	1.000	0.518
333.000	3.000	1147.000	2.000	46.000	6.000	3.000	ISA	GA	-3.000	0.565
342.000	1.000	1402.000	2.000	5.000	5.000	3.000	CON	AF	-4.000	1.226
344.000	3.000	553.000	1.000	29.000	3.000	3.000	CON	RW	0.000	-0.976
351.000	2.000	713.000	2.000	14.000	5.000	3.000	DOT	MI	-3.000	-0.561
353.000	5.000	1649.000	3.000	34.000	4.000	3.000	DOT	GA	1.000	1.866
412.000	2.000	457.000	1.000	60.000	2.000	4.000	CHO	AF	0.000	-1.225
414.000	1.000	863.000	1.000	10.000	1.000	4.000	CHO	RW	0.000	-0.172
421.000	1.000	1178.000	3.000	12.000	4.000	4.000	NOM	MI	-3.000	0.645
423.000	4.000	436.000	1.000	50.000	4.000	4.000	NOM	GA	0.000	-1.279
432.000	1.000	633.000	1.000	26.000	1.000	4.000	ISA	AF	0.000	-0.768
434.000	1.000	658.000	1.000	17.000	1.000	4.000	ISA	RW	0.000	-0.703
441.000	2.000	473.000	1.000	55.000	2.000	4.000	CON	MI	0.000	-1.183
443.000	3.000	493.000	1.000	9.000	3.000	4.000	CON	GA	0.000	-1.131
452.000	2.000	850.000	1.000	30.000	2.000	4.000	DOT	AF	0.000	-0.206
454.000	1.000	1030.000	2.000	1.000	1.000	4.000	DOT	RW	0.000	0.261
511.000	1.000	1217.000	2.000	22.000	1.000	5.000	CHO	MI	0.000	0.746
513.000	1.000	1173.000	1.000	7.000	1.000	5.000	CHO	GA	0.000	0.632
522.000	1.000	1184.000	1.000	35.000	2.000	5.000	NOM	AF	-1.000	0.661
524.000	2.000	595.000	1.000	44.000	1.000	5.000	NOM	RW	1.000	-0.867
531.000	1.000	477.000	1.000	49.000	1.000	5.000	ISA	MI	0.000	-1.173
533.000	1.000	641.000	1.000	40.000	1.000	5.000	ISA	GA	0.000	-0.748
542.000	2.000	550.000	1.000	52.000	2.000	5.000	CON	AF	0.000	-0.984
544.000	2.000	1398.000	3.000	38.000	1.000	5.000	CON	RW	1.000	1.216
551.000	1.000	444.000	1.000	59.000	1.000	5.000	DOT	MI	0.000	-1.258
553.000	3.000	1791.000	2.000	42.000	1.000	5.000	DOT	GA	2.000	2.235

Table C.1 (continued) - Subject 127

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	7.000	767.000	1.000	5.000	7.000	1.000	CHO	MI	0.000	0.193
113.000	7.000	606.000	1.000	47.000	6.000	1.000	CHO	GA	1.000	-0.414
122.000	2.000	442.000	1.000	40.000	3.000	1.000	NOM	AF	-1.000	-1.031
124.000	1.000	438.000	1.000	60.000	4.000	1.000	NOM	RW	-3.000	-1.046
131.000	6.000	829.000	1.000	9.000	6.000	1.000	ISA	MI	0.000	0.426
133.000	2.000	943.000	1.000	15.000	3.000	1.000	ISA	GA	-1.000	0.856
142.000	1.000	844.000	1.000	36.000	3.000	1.000	CON	AF	-2.000	0.483
144.000	2.000	735.000	1.000	51.000	4.000	1.000	CON	RW	-2.000	0.072
151.000	2.000	808.000	1.000	25.000	8.000	1.000	DOT	MI	-6.000	0.347
153.000	8.000	677.000	1.000	24.000	1.000	1.000	DOT	GA	7.000	-0.146
212.100	3.000	583.000	1.000	14.000	3.000	2.100	CHO	AF	0.000	-0.500
212.200	5.000	816.000	2.000	1.000	1.000	2.200	CHO	AF	4.000	0.377
214.100	5.000	647.000	1.000	3.000	5.000	2.100	CHO	RW	0.000	-0.259
214.200	6.000	593.000	4.000	42.000	1.000	2.200	CHO	RW	5.000	-0.463
221.100	2.000	1025.000	1.000	7.000	6.000	2.100	NOM	MI	-4.000	1.164
221.200	2.000	692.000	1.000	44.000	2.000	2.200	NOM	MI	0.000	-0.090
223.100	2.000	684.000	1.000	18.000	6.000	2.100	NOM	GA	-4.000	-0.120
223.200	3.000	816.000	1.000	30.000	3.000	2.200	NOM	GA	0.000	0.377
232.100	3.000	471.000	1.000	43.000	3.000	2.100	ISA	AF	0.000	-0.922
232.200	1.000	755.000	1.000	11.000	1.000	2.200	ISA	AF	0.000	0.148
234.100	5.000	447.000	1.000	45.000	5.000	2.100	ISA	RW	0.000	-1.012
234.200	6.000	912.000	1.000	56.000	1.000	2.200	ISA	RW	5.000	0.739
241.100	5.000	831.000	1.000	23.000	2.000	2.100	CON	MI	3.000	0.434
241.200	4.000	951.000	1.000	12.000	2.000	2.200	CON	MI	2.000	0.886
243.100	2.000	433.000	1.000	53.000	5.000	2.100	CON	GA	-3.000	-1.065
243.200	4.000	898.000	1.000	26.000	3.000	2.200	CON	GA	1.000	0.686
252.100	3.000	382.000	1.000	32.000	3.000	2.100	DOT	AF	0.000	-1.257
252.200	1.000	441.000	1.000	55.000	1.000	2.200	DOT	AF	0.000	-1.035
254.100	5.000	379.000	1.000	46.000	5.000	2.100	DOT	RW	0.000	-1.268
254.200	6.000	1078.000	1.000	29.000	1.000	2.200	DOT	RW	5.000	1.364
311.000	3.000	587.000	2.000	57.000	1.000	3.000	CHO	MI	2.000	-0.485
313.000	4.000	481.000	1.000	34.000	4.000	3.000	CHO	GA	0.000	-0.884
322.000	4.000	504.000	1.000	48.000	1.000	3.000	NOM	AF	3.000	-0.798
324.000	4.000	895.000	1.000	49.000	4.000	3.000	NOM	RW	0.000	0.675
331.000	3.000	1203.000	2.000	27.000	3.000	3.000	ISA	MI	0.000	1.835
333.000	6.000	790.000	1.000	28.000	6.000	3.000	ISA	GA	0.000	0.279
342.000	4.000	952.000	1.000	2.000	5.000	3.000	CON	AF	-1.000	0.889
344.000	3.000	962.000	1.000	13.000	3.000	3.000	CON	RW	0.000	0.927
351.000	2.000	773.000	1.000	39.000	5.000	3.000	DOT	MI	-3.000	0.215
353.000	1.000	1285.000	2.000	4.000	4.000	3.000	DOT	GA	-3.000	2.144
412.000	2.000	619.000	1.000	16.000	2.000	4.000	CHO	AF	0.000	-0.365
414.000	1.000	600.000	1.000	17.000	1.000	4.000	CHO	RW	0.000	-0.436
421.000	4.000	304.000	1.000	58.000	4.000	4.000	NOM	MI	0.000	-1.551
423.000	4.000	403.000	1.000	6.000	4.000	4.000	NOM	GA	0.000	-1.178
432.000	1.000	424.000	1.000	59.000	1.000	4.000	ISA	AF	0.000	-1.099
434.000	1.000	369.000	1.000	35.000	1.000	4.000	ISA	RW	0.000	-1.306
441.000	2.000	813.000	1.000	38.000	2.000	4.000	CON	MI	0.000	0.366
443.000	1.000	500.000	1.000	20.000	3.000	4.000	CON	GA	-2.000	-0.813
452.000	2.000	844.000	2.000	21.000	2.000	4.000	DOT	AF	0.000	0.483
454.000	4.000	528.000	1.000	50.000	1.000	4.000	DOT	RW	3.000	-0.707
511.000	3.000	1031.000	1.000	52.000	1.000	5.000	CHO	MI	2.000	1.187
513.000	2.000	578.000	3.000	37.000	1.000	5.000	CHO	GA	1.000	-0.519
522.000	1.000	465.000	1.000	54.000	2.000	5.000	NOM	AF	-1.000	-0.945
524.000	2.000	1598.000	1.000	41.000	1.000	5.000	NOM	RW	1.000	3.322
531.000	1.000	1353.000	1.000	8.000	1.000	5.000	ISA	MI	0.000	2.400
533.000	1.000	419.000	1.000	33.000	1.000	5.000	ISA	GA	0.000	-1.118
542.000	2.000	606.000	1.000	31.000	2.000	5.000	CON	AF	0.000	-0.414
544.000	3.000	909.000	1.000	10.000	1.000	5.000	CON	RW	2.000	0.728
551.000	1.000	613.000	1.000	19.000	1.000	5.000	DOT	MI	0.000	-0.387
553.000	2.000	618.000	1.000	22.000	1.000	5.000	DOT	GA	1.000	-0.368

Table C.1 (continued) - Subject 128

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	5.000	861.000	3.000	46.000	7.000	1.000	CHO	MI	-2.000	-0.272
113.000	3.000	1084.000	2.000	26.000	6.000	1.000	CHO	GA	-3.000	0.134
122.000	3.000	530.000	2.000	53.000	3.000	1.000	NOM	AF	0.000	-0.874
124.000	2.000	734.000	2.000	15.000	4.000	1.000	NOM	RW	-2.000	-0.503
131.000	3.000	1062.000	3.000	6.000	6.000	1.000	ISA	MI	-3.000	0.094
133.000	2.000	1063.000	2.000	52.000	3.000	1.000	ISA	GA	-1.000	0.095
142.000	3.000	1032.000	3.000	7.000	3.000	1.000	CON	AF	0.000	0.039
144.000	3.000	813.000	3.000	60.000	4.000	1.000	CON	RW	-1.000	-0.359
151.000	6.000	878.000	3.000	11.000	8.000	1.000	DOT	MI	-2.000	-0.241
153.000	4.000	1429.000	3.000	8.000	1.000	1.000	DOT	GA	3.000	0.761
212.100	3.000	667.000	1.000	25.000	3.000	2.100	CHO	AF	0.000	-0.624
212.200	4.000	1172.000	1.000	22.000	1.000	2.200	CHO	AF	3.000	0.294
214.100	5.000	606.000	1.000	55.000	5.000	2.100	CHO	RW	0.000	-0.735
214.200	1.000	1611.000	3.000	45.000	1.000	2.200	CHO	RW	0.000	1.092
221.100	6.000	1111.000	1.000	27.000	6.000	2.100	NOM	MI	0.000	0.183
221.200	2.000	858.000	1.000	2.000	2.000	2.200	NOM	MI	0.000	-0.277
223.100	6.000	1312.000	2.000	32.000	6.000	2.100	NOM	GA	0.000	0.548
223.200	3.000	738.000	1.000	20.000	3.000	2.200	NOM	GA	0.000	-0.495
232.100	3.000	488.000	1.000	4.000	3.000	2.100	ISA	AF	0.000	-0.950
232.200	4.000	826.000	1.000	33.000	1.000	2.200	ISA	AF	3.000	-0.335
234.100	5.000	705.000	2.000	17.000	5.000	2.100	ISA	RW	0.000	-0.555
234.200	1.000	1685.000	3.000	43.000	1.000	2.200	ISA	RW	0.000	1.226
241.100	2.000	1018.000	2.000	37.000	2.000	2.100	CON	MI	0.000	0.014
241.200	2.000	983.000	2.000	56.000	2.000	2.200	CON	MI	0.000	-0.050
243.100	2.000	1183.000	3.000	21.000	5.000	2.100	CON	GA	-3.000	0.314
243.200	3.000	1151.000	2.000	47.000	3.000	2.200	CON	GA	0.000	0.255
252.100	3.000	406.000	1.000	42.000	3.000	2.100	DOT	AF	0.000	-1.099
252.200	1.000	1464.000	1.000	18.000	1.000	2.200	DOT	AF	0.000	0.824
254.100	5.000	935.000	3.000	59.000	5.000	2.100	DOT	RW	0.000	-0.137
254.200	6.000	1758.000	2.000	16.000	1.000	2.200	DOT	RW	5.000	1.359
311.000	1.000	1121.000	2.000	50.000	1.000	3.000	CHO	MI	0.000	0.201
313.000	4.000	826.000	2.000	49.000	4.000	3.000	CHO	GA	0.000	-0.335
322.000	4.000	736.000	2.000	54.000	1.000	3.000	NOM	AF	3.000	-0.499
324.000	4.000	1004.000	2.000	3.000	4.000	3.000	NOM	RW	0.000	-0.012
331.000	5.000	2918.000	3.000	12.000	3.000	3.000	ISA	MI	2.000	3.468
333.000	4.000	1045.000	2.000	30.000	6.000	3.000	ISA	GA	-2.000	0.063
342.000	5.000	3126.000	3.000	5.000	5.000	3.000	CON	AF	0.000	3.846
344.000	3.000	450.000	1.000	35.000	3.000	3.000	CON	RW	0.000	-1.019
351.000	2.000	1101.000	3.000	40.000	5.000	3.000	DOT	MI	-3.000	0.165
353.000	4.000	913.000	3.000	44.000	4.000	3.000	DOT	GA	0.000	-0.177
412.000	2.000	312.000	1.000	41.000	2.000	4.000	CHO	AF	0.000	-1.270
414.000	1.000	1415.000	2.000	9.000	1.000	4.000	CHO	RW	0.000	0.735
421.000	4.000	471.000	1.000	31.000	4.000	4.000	NOM	MI	0.000	-0.981
423.000	4.000	439.000	1.000	39.000	4.000	4.000	NOM	GA	0.000	-1.039
432.000	1.000	371.000	1.000	58.000	1.000	4.000	ISA	AF	0.000	-1.163
434.000	1.000	463.000	2.000	36.000	1.000	4.000	ISA	RW	0.000	-0.995
441.000	2.000	572.000	2.000	28.000	2.000	4.000	CON	MI	0.000	-0.797
443.000	3.000	636.000	1.000	13.000	3.000	4.000	CON	GA	0.000	-0.681
452.000	2.000	1106.000	3.000	1.000	2.000	4.000	DOT	AF	0.000	0.174
454.000	4.000	530.000	2.000	51.000	1.000	4.000	DOT	RW	3.000	-0.874
511.000	1.000	2444.000	3.000	23.000	1.000	5.000	CHO	MI	0.000	2.606
513.000	1.000	1135.000	2.000	57.000	1.000	5.000	CHO	GA	0.000	0.226
522.000	2.000	1464.000	2.000	10.000	2.000	5.000	NOM	AF	0.000	0.824
524.000	2.000	973.000	2.000	34.000	1.000	5.000	NOM	RW	1.000	-0.068
531.000	1.000	573.000	2.000	24.000	1.000	5.000	ISA	MI	0.000	-0.795
533.000	1.000	807.000	2.000	14.000	1.000	5.000	ISA	GA	0.000	-0.370
542.000	2.000	630.000	2.000	48.000	2.000	5.000	CON	AF	0.000	-0.692
544.000	2.000	818.000	2.000	38.000	1.000	5.000	CON	RW	1.000	-0.350
551.000	1.000	505.000	2.000	29.000	1.000	5.000	DOT	MI	0.000	-0.919
553.000	3.000	1562.000	3.000	19.000	1.000	5.000	DOT	GA	2.000	1.003

Table C.1 (continued) - Subject 129

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	5.000	1869.000	2.000	46.000	7.000	1.000	CHO	MI	-2.000	0.780
113.000	8.000	991.000	1.000	26.000	6.000	1.000	CHO	GA	2.000	-0.470
122.000	4.000	1667.000	3.000	53.000	3.000	1.000	NOM	AF	1.000	0.492
124.000	4.000	1078.000	2.000	15.000	4.000	1.000	NOM	RW	0.000	-0.347
131.000	4.000	1696.000	2.000	6.000	6.000	1.000	ISA	MI	-2.000	0.533
133.000	5.000	1145.000	1.000	52.000	3.000	1.000	ISA	GA	2.000	-0.251
142.000	3.000	1193.000	2.000	7.000	3.000	1.000	CON	AF	0.000	-0.183
144.000	5.000	773.000	2.000	60.000	4.000	1.000	CON	RW	1.000	-0.781
151.000	5.000	1249.000	3.000	11.000	8.000	1.000	DOT	MI	-3.000	-0.103
153.000	4.000	1225.000	4.000	8.000	1.000	1.000	DOT	GA	3.000	-0.137
212.100	3.000	666.000	1.000	25.000	3.000	2.100	CHO	AF	0.000	-0.933
212.200	4.000	1449.000	1.000	22.000	1.000	2.200	CHO	AF	3.000	0.182
214.100	5.000	541.000	1.000	55.000	5.000	2.100	CHO	RW	0.000	-1.111
214.200	1.000	1273.000	2.000	45.000	1.000	2.200	CHO	RW	0.000	-0.069
221.100	5.000	81.000	4.000	27.000	6.000	2.100	NOM	MI	-1.000	-1.766
221.200	2.000	1018.000	1.000	2.000	2.000	2.200	NOM	MI	0.000	-0.432
223.100	6.000	1007.000	1.000	32.000	6.000	2.100	NOM	GA	0.000	-0.448
223.200	3.000	728.000	1.000	20.000	3.000	2.200	NOM	GA	0.000	-0.845
232.100	3.000	661.000	1.000	4.000	3.000	2.100	ISA	AF	0.000	-0.940
232.200	4.000	1653.000	1.000	33.000	1.000	2.200	ISA	AF	3.000	0.472
234.100	5.000	1252.000	2.000	17.000	5.000	2.100	ISA	RW	0.000	-0.099
234.200	1.000	2030.000	1.000	43.000	1.000	2.200	ISA	RW	0.000	1.009
241.100	6.000	949.000	2.000	37.000	2.000	2.100	CON	MI	4.000	-0.530
241.200	4.000	1590.000	2.000	56.000	2.000	2.200	CON	MI	2.000	0.383
243.100	5.000	2140.000	2.000	21.000	5.000	2.100	CON	GA	0.000	1.166
243.200	3.000	2074.000	2.000	47.000	3.000	2.200	CON	GA	0.000	1.072
252.100	3.000	709.000	1.000	42.000	3.000	2.100	DOT	AF	0.000	-0.872
252.200	1.000	1100.000	1.000	18.000	1.000	2.200	DOT	AF	0.000	-0.315
254.100	5.000	596.000	2.000	59.000	5.000	2.100	DOT	RW	0.000	-1.033
254.200	1.000	3363.000	2.000	16.000	1.000	2.200	DOT	RW	0.000	2.907
311.000	1.000	1312.000	2.000	50.000	1.000	3.000	CHO	MI	0.000	-0.013
313.000	4.000	1033.000	1.000	49.000	4.000	3.000	CHO	GA	0.000	-0.411
322.000	4.000	1376.000	2.000	54.000	1.000	3.000	NOM	AF	3.000	0.078
324.000	2.000	2738.000	2.000	3.000	4.000	3.000	NOM	RW	-2.000	2.017
331.000	3.000	2721.000	2.000	12.000	3.000	3.000	ISA	MI	0.000	1.993
333.000	6.000	1189.000	1.000	30.000	6.000	3.000	ISA	GA	0.000	-0.188
342.000	5.000	2249.000	2.000	5.000	5.000	3.000	CON	AF	0.000	1.321
344.000	2.000	1610.000	2.000	35.000	3.000	3.000	CON	RW	-1.000	0.411
351.000	2.000	1056.000	2.000	40.000	5.000	3.000	DOT	MI	-3.000	-0.378
353.000	4.000	985.000	3.000	44.000	4.000	3.000	DOT	GA	0.000	-0.479
412.000	2.000	546.000	1.000	41.000	2.000	4.000	CHO	AF	0.000	-1.104
414.000	1.000	2285.000	2.000	9.000	1.000	4.000	CHO	RW	0.000	1.372
421.000	4.000	755.000	1.000	31.000	4.000	4.000	NOM	MI	0.000	-0.807
423.000	4.000	1093.000	1.000	39.000	4.000	4.000	NOM	GA	0.000	-0.325
432.000	1.000	877.000	1.000	58.000	1.000	4.000	ISA	AF	0.000	-0.633
434.000	1.000	668.000	1.000	36.000	1.000	4.000	ISA	RW	0.000	-0.930
441.000	2.000	1484.000	1.000	28.000	2.000	4.000	CON	MI	0.000	0.232
443.000	3.000	1332.000	2.000	13.000	3.000	4.000	CON	GA	0.000	0.015
452.000	2.000	2088.000	2.000	1.000	2.000	4.000	DOT	AF	0.000	1.092
454.000	2.000	856.000	2.000	51.000	1.000	4.000	DOT	RW	1.000	-0.663
511.000	1.000	3569.000	3.000	23.000	1.000	5.000	CHO	MI	0.000	3.201
513.000	1.000	1201.000	3.000	57.000	1.000	5.000	CHO	GA	0.000	-0.171
522.000	2.000	2494.000	3.000	10.000	2.000	5.000	NOM	AF	0.000	1.670
524.000	2.000	702.000	2.000	34.000	1.000	5.000	NOM	RW	1.000	-0.882
531.000	1.000	592.000	2.000	24.000	1.000	5.000	ISA	MI	0.000	-1.039
533.000	1.000	781.000	1.000	14.000	1.000	5.000	ISA	GA	0.000	-0.769
542.000	2.000	1548.000	1.000	48.000	2.000	5.000	CON	AF	0.000	0.323
544.000	2.000	645.000	2.000	38.000	1.000	5.000	CON	RW	1.000	-0.963
551.000	1.000	622.000	2.000	29.000	1.000	5.000	DOT	MI	0.000	-0.996
553.000	1.000	1109.000	2.000	19.000	1.000	5.000	DOT	GA	0.000	-0.302

Table C.1 (continued) - Subject 130

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	6.000	1374.000	2.000	22.000	7.000	1.000	CHO	MI	-1.000	0.390
113.000	6.000	1187.000	2.000	8.000	6.000	1.000	CHO	GA	0.000	0.110
122.000	3.000	1042.000	2.000	13.000	3.000	1.000	NOM	AF	0.000	-0.108
124.000	4.000	1320.000	2.000	29.000	4.000	1.000	NOM	RW	0.000	0.309
131.000	5.000	378.000	2.000	48.000	6.000	1.000	ISA	MI	-1.000	-1.102
133.000	2.000	1263.000	2.000	6.000	3.000	1.000	ISA	GA	-1.000	0.224
142.000	2.000	1147.000	2.000	46.000	3.000	1.000	CON	AF	-1.000	0.050
151.000	6.000	3028.000	2.000	4.000	8.000	1.000	DOT	MI	-2.000	2.867
153.000	6.000	1793.000	2.000	33.000	1.000	1.000	DOT	GA	5.000	1.017
212.100	3.000	388.000	1.000	50.000	3.000	2.100	CHO	AF	0.000	-1.087
212.200	1.000	1099.000	2.000	44.000	1.000	2.200	CHO	AF	0.000	-0.022
221.100	6.000	420.000	1.000	31.000	6.000	2.100	NOM	MI	0.000	-1.039
221.200	2.000	817.000	1.000	47.000	2.000	2.200	NOM	MI	0.000	-0.445
223.100	6.000	1505.000	2.000	21.000	6.000	2.100	NOM	GA	0.000	0.586
223.200	3.000	578.000	1.000	58.000	3.000	2.200	NOM	GA	0.000	-0.803
232.100	3.000	385.000	1.000	20.000	3.000	2.100	ISA	AF	0.000	-1.092
232.200	4.000	1173.000	1.000	26.000	1.000	2.200	ISA	AF	3.000	0.089
241.100	5.000	1216.000	2.000	9.000	2.000	2.100	CON	MI	3.000	0.153
241.200	4.000	1613.000	1.000	24.000	2.000	2.200	CON	MI	2.000	0.748
243.100	5.000	915.000	1.000	59.000	5.000	2.100	CON	GA	0.000	-0.298
243.200	3.000	1673.000	2.000	42.000	3.000	2.200	CON	GA	0.000	0.838
252.100	3.000	305.000	1.000	40.000	3.000	2.100	DOT	AF	0.000	-1.211
252.200	1.000	725.000	1.000	7.000	1.000	2.200	DOT	AF	0.000	-0.582
254.100	5.000	565.000	2.000	52.000	5.000	2.100	DOT	RW	0.000	-0.822
254.200	4.000	1576.000	2.000	41.000	1.000	2.200	DOT	RW	3.000	0.692
311.000	4.000	1098.000	1.000	23.000	1.000	3.000	CHO	MI	3.000	-0.024
313.000	4.000	1573.000	1.000	3.000	4.000	3.000	CHO	GA	0.000	0.688
322.000	4.000	909.000	1.000	16.000	1.000	3.000	NOM	AF	3.000	-0.307
324.000	4.000	806.000	1.000	11.000	4.000	3.000	NOM	RW	0.000	-0.461
331.000	3.000	1629.000	2.000	54.000	3.000	3.000	ISA	MI	0.000	0.772
333.000	6.000	1294.000	1.000	27.000	6.000	3.000	ISA	GA	0.000	0.270
342.000	5.000	1122.000	2.000	49.000	5.000	3.000	CON	AF	0.000	0.012
351.000	2.000	1884.000	1.000	17.000	5.000	3.000	DOT	MI	-3.000	1.154
353.000	4.000	2842.000	4.000	32.000	4.000	3.000	DOT	GA	0.000	2.589
412.000	2.000	304.000	1.000	34.000	2.000	4.000	CHO	AF	0.000	-1.213
421.000	4.000	549.000	1.000	5.000	4.000	4.000	NOM	MI	0.000	-0.846
423.000	4.000	465.000	1.000	36.000	4.000	4.000	NOM	GA	0.000	-0.972
432.000	1.000	578.000	1.000	14.000	1.000	4.000	ISA	AF	0.000	-0.803
441.000	2.000	739.000	1.000	12.000	2.000	4.000	CON	MI	0.000	-0.561
443.000	3.000	258.000	1.000	45.000	3.000	4.000	CON	GA	0.000	-1.282
452.000	4.000	2157.000	2.000	10.000	2.000	4.000	DOT	AF	2.000	1.563
454.000	4.000	741.000	1.000	30.000	1.000	4.000	DOT	RW	3.000	-0.558
511.000	1.000	3213.000	2.000	43.000	1.000	5.000	CHO	MI	0.000	3.144
513.000	1.000	824.000	1.000	2.000	1.000	5.000	CHO	GA	0.000	-0.434
522.000	1.000	954.000	1.000	19.000	2.000	5.000	NOM	AF	-1.000	-0.239
524.000	2.000	654.000	2.000	60.000	1.000	5.000	NOM	RW	1.000	-0.689
531.000	1.000	794.000	1.000	25.000	1.000	5.000	ISA	MI	0.000	-0.479
533.000	1.000	542.000	2.000	56.000	1.000	5.000	ISA	GA	0.000	-0.856
542.000	2.000	1068.000	1.000	35.000	2.000	5.000	CON	AF	0.000	-0.069
551.000	1.000	773.000	2.000	57.000	1.000	5.000	DOT	MI	0.000	-0.510
553.000	2.000	1548.000	4.000	51.000	1.000	5.000	DOT	GA	1.000	0.650

Table C.1 (continued) - Subject 131

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	4.000	766.000	2.000	47.000	7.000	1.000	CHO	MI	-3.000	-0.384
113.000	3.000	1171.000	2.000	12.000	6.000	1.000	CHO	GA	-3.000	0.454
122.000	3.000	642.000	2.000	14.000	3.000	1.000	NOM	AF	0.000	-0.640
124.000	3.000	885.000	2.000	13.000	4.000	1.000	NOM	RW	-1.000	-0.137
131.000	4.000	797.000	2.000	18.000	6.000	1.000	ISA	MI	-2.000	-0.320
133.000	2.000	1579.000	2.000	5.000	3.000	1.000	ISA	GA	-1.000	1.298
142.000	3.000	666.000	2.000	51.000	3.000	1.000	CON	AF	0.000	-0.591
151.000	5.000	754.000	2.000	57.000	8.000	1.000	DOT	MI	-3.000	-0.408
153.000	7.000	1810.000	3.000	29.000	1.000	1.000	DOT	GA	6.000	1.776
212.100	3.000	475.000	1.000	33.000	3.000	2.100	CHO	AF	0.000	-0.986
212.200	4.000	666.000	1.000	39.000	1.000	2.200	CHO	AF	3.000	-0.591
221.100	6.000	511.000	2.000	24.000	6.000	2.100	NOM	MI	0.000	-0.911
221.200	7.000	1001.000	2.000	38.000	2.000	2.200	NOM	MI	5.000	0.103
223.100	6.000	515.000	1.000	54.000	6.000	2.100	NOM	GA	0.000	-0.903
223.200	1.000	949.000	2.000	26.000	3.000	2.200	NOM	GA	-2.000	-0.005
232.100	3.000	376.000	1.000	45.000	3.000	2.100	ISA	AF	0.000	-1.190
232.200	4.000	741.000	2.000	19.000	1.000	2.200	ISA	AF	3.000	-0.435
241.100	2.000	686.000	2.000	53.000	2.000	2.100	CON	MI	0.000	-0.549
241.200	4.000	849.000	2.000	41.000	2.000	2.200	CON	MI	2.000	-0.212
243.100	5.000	409.000	2.000	56.000	5.000	2.100	CON	GA	0.000	-1.122
243.200	4.000	1674.000	2.000	1.000	3.000	2.200	CON	GA	1.000	1.495
252.100	3.000	322.000	1.000	43.000	3.000	2.100	DOT	AF	0.000	-1.302
252.200	4.000	884.000	1.000	36.000	1.000	2.200	DOT	AF	3.000	-0.140
254.100	5.000	530.000	2.000	28.000	5.000	2.100	DOT	RW	0.000	-0.872
254.200	4.000	1442.000	2.000	49.000	1.000	2.200	DOT	RW	3.000	1.015
311.000	1.000	1744.000	2.000	22.000	1.000	3.000	CHO	MI	0.000	1.640
313.000	3.000	2187.000	2.000	6.000	4.000	3.000	CHO	GA	-1.000	2.556
322.000	4.000	2047.000	2.000	23.000	1.000	3.000	NOM	AF	3.000	2.266
324.000	2.000	884.000	2.000	27.000	4.000	3.000	NOM	RW	-2.000	-0.140
331.000	5.000	861.000	2.000	60.000	3.000	3.000	ISA	MI	2.000	-0.187
333.000	3.000	1139.000	1.000	50.000	6.000	3.000	ISA	GA	-3.000	0.388
342.000	5.000	1580.000	2.000	25.000	5.000	3.000	CON	AF	0.000	1.300
351.000	2.000	1333.000	2.000	8.000	5.000	3.000	DOT	MI	-3.000	0.789
353.000	4.000	1295.000	2.000	7.000	4.000	3.000	DOT	GA	0.000	0.711
412.000	2.000	458.000	1.000	16.000	2.000	4.000	CHO	AF	0.000	-1.021
421.000	4.000	451.000	1.000	4.000	4.000	4.000	NOM	MI	0.000	-1.035
423.000	4.000	619.000	1.000	30.000	4.000	4.000	NOM	GA	0.000	-0.688
432.000	1.000	650.000	2.000	15.000	1.000	4.000	ISA	AF	0.000	-0.624
441.000	2.000	817.000	2.000	3.000	2.000	4.000	CON	MI	0.000	-0.278
443.000	3.000	374.000	1.000	31.000	3.000	4.000	CON	GA	0.000	-1.195
452.000	2.000	1354.000	2.000	9.000	2.000	4.000	DOT	AF	0.000	0.833
454.000	2.000	477.000	2.000	42.000	1.000	4.000	DOT	RW	1.000	-0.982
511.000	1.000	1814.000	2.000	55.000	1.000	5.000	CHO	MI	0.000	1.784
513.000	1.000	1490.000	2.000	2.000	1.000	5.000	CHO	GA	0.000	1.114
522.000	2.000	832.000	2.000	10.000	2.000	5.000	NOM	AF	0.000	-0.247
524.000	2.000	423.000	1.000	35.000	1.000	5.000	NOM	RW	1.000	-1.093
531.000	1.000	1368.000	2.000	48.000	1.000	5.000	ISA	MI	0.000	0.862
533.000	1.000	1168.000	2.000	40.000	1.000	5.000	ISA	GA	0.000	0.448
542.000	2.000	389.000	2.000	52.000	2.000	5.000	CON	AF	0.000	-1.164
551.000	1.000	676.000	1.000	17.000	1.000	5.000	DOT	MI	0.000	-0.570
553.000	2.000	994.000	2.000	32.000	1.000	5.000	DOT	GA	1.000	0.088

Table C.1 (continued) - Subject 132

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	6.000	1934.000	2.000	2.000	7.000	1.000	CHO	MI	-1.000	3.076
113.000	5.000	1124.000	2.000	8.000	6.000	1.000	CHO	GA	-1.000	0.899
122.000	3.000	570.000	2.000	18.000	3.000	1.000	NOM	AF	0.000	-0.591
124.000	2.000	598.000	2.000	25.000	4.000	1.000	NOM	RW	-2.000	-0.516
131.000	4.000	350.000	2.000	36.000	6.000	1.000	ISA	MI	-2.000	-1.182
133.000	4.000	1138.000	2.000	5.000	3.000	1.000	ISA	GA	1.000	0.936
142.000	4.000	1094.000	2.000	10.000	3.000	1.000	CON	AF	1.000	0.818
151.000	3.000	537.000	2.000	43.000	8.000	1.000	DOT	MI	-5.000	-0.680
153.000	5.000	1874.000	2.000	9.000	1.000	1.000	DOT	GA	4.000	2.915
212.100	3.000	410.000	1.000	28.000	3.000	2.100	CHO	AF	0.000	-1.021
212.200	4.000	1336.000	1.000	59.000	1.000	2.200	CHO	AF	3.000	1.469
221.100	6.000	858.000	3.000	54.000	6.000	2.100	NOM	MI	0.000	0.183
221.200	2.000	761.000	2.000	37.000	2.000	2.200	NOM	MI	0.000	-0.077
223.100	2.000	711.000	1.000	1.000	6.000	2.100	NOM	GA	-4.000	-0.212
223.200	3.000	576.000	2.000	14.000	3.000	2.200	NOM	GA	0.000	-0.575
232.100	3.000	329.000	1.000	50.000	3.000	2.100	ISA	AF	0.000	-1.239
232.200	1.000	800.000	1.000	6.000	1.000	2.200	ISA	AF	0.000	0.028
241.100	5.000	679.000	2.000	53.000	2.000	2.100	CON	MI	3.000	-0.298
241.200	2.000	792.000	1.000	32.000	2.000	2.200	CON	MI	0.000	0.006
243.100	2.000	1035.000	2.000	13.000	5.000	2.100	CON	GA	-3.000	0.659
243.200	3.000	1205.000	2.000	52.000	3.000	2.200	CON	GA	0.000	1.116
252.100	3.000	465.000	1.000	3.000	3.000	2.100	DOT	AF	0.000	-0.873
252.200	1.000	485.000	1.000	22.000	1.000	2.200	DOT	AF	0.000	-0.819
254.100	5.000	517.000	1.000	46.000	5.000	2.100	DOT	RW	0.000	-0.733
254.200	1.000	1141.000	2.000	56.000	1.000	2.200	DOT	RW	0.000	0.944
311.000	1.000	1224.000	2.000	42.000	1.000	3.000	CHO	MI	0.000	1.167
313.000	4.000	730.000	1.000	39.000	4.000	3.000	CHO	GA	0.000	-0.161
322.000	1.000	465.000	1.000	21.000	1.000	3.000	NOM	AF	0.000	-0.873
324.000	4.000	408.000	2.000	35.000	4.000	3.000	NOM	RW	0.000	-1.026
331.000	3.000	874.000	2.000	19.000	3.000	3.000	ISA	MI	0.000	0.226
333.000	6.000	527.000	2.000	24.000	6.000	3.000	ISA	GA	0.000	-0.706
342.000	5.000	1015.000	2.000	40.000	5.000	3.000	CON	AF	0.000	0.606
351.000	5.000	924.000	2.000	38.000	5.000	3.000	DOT	MI	0.000	0.361
353.000	4.000	1001.000	2.000	17.000	4.000	3.000	DOT	GA	0.000	0.568
412.000	2.000	379.000	2.000	34.000	2.000	4.000	CHO	AF	0.000	-1.104
421.000	4.000	351.000	1.000	49.000	4.000	4.000	NOM	MI	0.000	-1.180
423.000	4.000	428.000	1.000	58.000	4.000	4.000	NOM	GA	0.000	-0.973
432.000	1.000	378.000	1.000	57.000	1.000	4.000	ISA	AF	0.000	-1.107
441.000	2.000	549.000	1.000	4.000	2.000	4.000	CON	MI	0.000	-0.647
443.000	3.000	346.000	1.000	26.000	3.000	4.000	CON	GA	0.000	-1.193
452.000	2.000	1243.000	2.000	7.000	2.000	4.000	DOT	AF	0.000	1.219
454.000	4.000	430.000	2.000	33.000	1.000	4.000	DOT	RW	3.000	-0.967
511.000	2.000	569.000	2.000	31.000	1.000	5.000	CHO	MI	1.000	-0.594
513.000	1.000	878.000	2.000	20.000	1.000	5.000	CHO	GA	0.000	0.237
522.000	2.000	1233.000	2.000	27.000	2.000	5.000	NOM	AF	0.000	1.192
524.000	2.000	1012.000	2.000	55.000	1.000	5.000	NOM	RW	1.000	0.597
531.000	1.000	928.000	1.000	12.000	1.000	5.000	ISA	MI	0.000	0.372
533.000	1.000	684.000	2.000	11.000	1.000	5.000	ISA	GA	0.000	-0.284
542.000	2.000	737.000	2.000	44.000	2.000	5.000	CON	AF	0.000	-0.142
551.000	1.000	515.000	2.000	48.000	1.000	5.000	DOT	MI	0.000	-0.739
553.000	2.000	1131.000	2.000	16.000	1.000	5.000	DOT	GA	1.000	0.917

Table C.1 (continued) - Subject 133

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	5.000	1508.000	2.000	1.000	7.000	1.000	CHO	MI	-2.000	0.369
113.000	5.000	925.000	2.000	33.000	6.000	1.000	CHO	GA	-1.000	-0.421
122.000	3.000	784.000	2.000	32.000	3.000	1.000	NOM	AF	0.000	-0.611
124.000	5.000	822.000	2.000	53.000	4.000	1.000	NOM	RW	1.000	-0.560
131.000	4.000	1836.000	2.000	7.000	6.000	1.000	ISA	MI	-2.000	0.813
133.000	5.000	2411.000	2.000	10.000	3.000	1.000	ISA	GA	2.000	1.592
142.000	3.000	1317.000	1.000	40.000	3.000	1.000	CON	AF	0.000	0.110
144.000	4.000	1227.000	2.000	4.000	4.000	1.000	CON	RW	0.000	-0.012
151.000	4.000	1336.000	1.000	42.000	8.000	1.000	DOT	MI	-4.000	0.136
153.000	2.000	2413.000	2.000	9.000	1.000	1.000	DOT	GA	1.000	1.594
212.100	3.000	416.000	1.000	30.000	3.000	2.100	CHO	AF	0.000	-1.110
212.200	1.000	1847.000	1.000	24.000	1.000	2.200	CHO	AF	0.000	0.828
214.100	5.000	559.000	1.000	55.000	5.000	2.100	CHO	RW	0.000	-0.916
214.200	1.000	1788.000	1.000	23.000	1.000	2.200	CHO	RW	0.000	0.748
221.100	2.000	1237.000	1.000	22.000	6.000	2.100	NOM	MI	-4.000	0.002
221.200	2.000	1056.000	1.000	20.000	2.000	2.200	NOM	MI	0.000	-0.243
223.100	2.000	2553.000	2.000	18.000	6.000	2.100	NOM	GA	-4.000	1.784
223.200	3.000	600.000	1.000	39.000	3.000	2.200	NOM	GA	0.000	-0.861
232.100	3.000	290.000	1.000	60.000	3.000	2.100	ISA	AF	0.000	-1.280
232.200	1.000	1575.000	1.000	25.000	1.000	2.200	ISA	AF	0.000	0.460
234.100	5.000	744.000	1.000	11.000	5.000	2.100	ISA	RW	0.000	-0.666
234.200	6.000	2699.000	2.000	37.000	1.000	2.200	ISA	RW	5.000	1.982
241.100	5.000	1263.000	1.000	3.000	2.000	2.100	CON	MI	3.000	0.037
241.200	2.000	959.000	1.000	26.000	2.000	2.200	CON	MI	0.000	-0.375
243.100	5.000	2519.000	3.000	36.000	5.000	2.100	CON	GA	0.000	1.738
243.200	4.000	869.000	2.000	31.000	3.000	2.200	CON	GA	1.000	-0.496
252.100	3.000	610.000	1.000	13.000	3.000	2.100	DOT	AF	0.000	-0.847
252.200	1.000	943.000	1.000	45.000	1.000	2.200	DOT	AF	0.000	-0.396
254.100	5.000	725.000	1.000	57.000	5.000	2.100	DOT	RW	0.000	-0.691
254.200	1.000	4086.000	2.000	14.000	1.000	2.200	DOT	RW	0.000	3.860
311.000	4.000	1289.000	1.000	58.000	1.000	3.000	CHO	MI	3.000	0.072
313.000	6.000	1673.000	1.000	51.000	4.000	3.000	CHO	GA	2.000	0.592
322.000	1.000	1116.000	1.000	48.000	1.000	3.000	NOM	AF	0.000	-0.162
324.000	4.000	1044.000	1.000	29.000	4.000	3.000	NOM	RW	0.000	-0.259
331.000	5.000	1843.000	1.000	41.000	3.000	3.000	ISA	MI	2.000	0.823
333.000	6.000	860.000	1.000	21.000	6.000	3.000	ISA	GA	0.000	-0.509
342.000	5.000	1756.000	1.000	16.000	5.000	3.000	CON	AF	0.000	0.705
344.000	3.000	2272.000	1.000	6.000	3.000	3.000	CON	RW	0.000	1.403
351.000	5.000	1169.000	1.000	28.000	5.000	3.000	DOT	MI	0.000	-0.090
353.000	5.000	2485.000	3.000	56.000	4.000	3.000	DOT	GA	1.000	1.692
412.000	2.000	526.000	1.000	2.000	2.000	4.000	CHO	AF	0.000	-0.961
414.000	2.000	1098.000	1.000	15.000	1.000	4.000	CHO	RW	1.000	-0.186
421.000	4.000	724.000	1.000	12.000	4.000	4.000	NOM	MI	0.000	-0.693
423.000	4.000	480.000	1.000	17.000	4.000	4.000	NOM	GA	0.000	-1.023
432.000	1.000	1002.000	1.000	43.000	1.000	4.000	ISA	AF	0.000	-0.316
434.000	1.000	651.000	1.000	46.000	1.000	4.000	ISA	RW	0.000	-0.792
441.000	2.000	367.000	1.000	34.000	2.000	4.000	CON	MI	0.000	-1.176
443.000	3.000	363.000	1.000	54.000	3.000	4.000	CON	GA	0.000	-1.182
452.000	2.000	508.000	2.000	47.000	2.000	4.000	DOT	AF	0.000	-0.985
454.000	2.000	412.000	2.000	50.000	1.000	4.000	DOT	RW	1.000	-1.115
511.000	2.000	1058.000	1.000	27.000	1.000	5.000	CHO	MI	1.000	-0.240
513.000	1.000	1079.000	1.000	35.000	1.000	5.000	CHO	GA	0.000	-0.212
522.000	1.000	2034.000	1.000	19.000	2.000	5.000	NOM	AF	-1.000	1.081
524.000	2.000	829.000	1.000	52.000	1.000	5.000	NOM	RW	1.000	-0.551
531.000	1.000	483.000	1.000	59.000	1.000	5.000	ISA	MI	0.000	-1.019
533.000	1.000	678.000	1.000	38.000	1.000	5.000	ISA	GA	0.000	-0.755
542.000	2.000	1567.000	1.000	44.000	2.000	5.000	CON	AF	0.000	0.449
544.000	1.000	822.000	1.000	8.000	1.000	5.000	CON	RW	0.000	-0.560
551.000	1.000	753.000	1.000	5.000	1.000	5.000	DOT	MI	0.000	-0.653
553.000	2.000	1276.000	1.000	49.000	1.000	5.000	DOT	GA	1.000	0.055

Table C.1 (continued) - Subject 134

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	5.000	1081.000	2.000	25.000	7.000	1.000	CHO	MI	-2.000	-0.539
113.000	5.000	2437.000	2.000	29.000	6.000	1.000	CHO	GA	-1.000	1.276
122.000	5.000	2119.000	2.000	13.000	3.000	1.000	NOM	AF	2.000	0.850
124.000	5.000	704.000	2.000	42.000	4.000	1.000	NOM	RW	1.000	-1.043
131.000	4.000	1114.000	1.000	34.000	6.000	1.000	ISA	MI	-2.000	-0.495
133.000	2.000	1904.000	2.000	20.000	3.000	1.000	ISA	GA	-1.000	0.563
142.000	5.000	1704.000	3.000	27.000	3.000	1.000	CON	AF	2.000	0.295
144.000	5.000	1087.000	2.000	41.000	4.000	1.000	CON	RW	1.000	-0.531
151.000	8.000	1546.000	2.000	48.000	8.000	1.000	DOT	MI	0.000	0.083
153.000	6.000	1681.000	3.000	12.000	1.000	1.000	DOT	GA	5.000	0.264
212.100	3.000	1214.000	1.000	33.000	3.000	2.100	CHO	AF	0.000	-0.361
212.200	4.000	1287.000	1.000	22.000	1.000	2.200	CHO	AF	3.000	-0.263
214.100	5.000	699.000	1.000	45.000	5.000	2.100	CHO	RW	0.000	-1.050
214.200	6.000	2953.000	2.000	1.000	1.000	2.200	CHO	RW	5.000	1.966
221.100	6.000	1334.000	1.000	55.000	6.000	2.100	NOM	MI	0.000	-0.200
221.200	2.000	1205.000	2.000	32.000	2.000	2.200	NOM	MI	0.000	-0.373
223.100	6.000	1361.000	1.000	37.000	6.000	2.100	NOM	GA	0.000	-0.164
223.200	3.000	1293.000	1.000	56.000	3.000	2.200	NOM	GA	0.000	-0.255
232.100	3.000	533.000	1.000	60.000	3.000	2.100	ISA	AF	0.000	-1.272
232.200	4.000	924.000	1.000	59.000	1.000	2.200	ISA	AF	3.000	-0.749
234.100	5.000	1194.000	1.000	9.000	5.000	2.100	ISA	RW	0.000	-0.388
234.200	6.000	2277.000	2.000	31.000	1.000	2.200	ISA	RW	5.000	1.062
241.100	5.000	2447.000	2.000	6.000	2.000	2.100	CON	MI	3.000	1.289
241.200	2.000	2019.000	2.000	7.000	2.000	2.200	CON	MI	0.000	0.716
243.100	2.000	1290.000	2.000	16.000	5.000	2.100	CON	GA	-3.000	-0.259
243.200	4.000	1254.000	1.000	44.000	3.000	2.200	CON	GA	1.000	-0.307
252.100	3.000	411.000	1.000	54.000	3.000	2.100	DOT	AF	0.000	-1.436
252.200	1.000	1560.000	1.000	28.000	1.000	2.200	DOT	AF	0.000	0.102
254.100	5.000	492.000	1.000	57.000	5.000	2.100	DOT	RW	0.000	-1.327
254.200	6.000	2082.000	2.000	14.000	1.000	2.200	DOT	RW	5.000	0.801
311.000	1.000	1001.000	2.000	50.000	1.000	3.000	CHO	MI	0.000	-0.646
313.000	1.000	2585.000	2.000	30.000	4.000	3.000	CHO	GA	-3.000	1.474
322.000	1.000	3639.000	1.000	3.000	1.000	3.000	NOM	AF	0.000	2.885
324.000	4.000	2017.000	2.000	23.000	4.000	3.000	NOM	RW	0.000	0.714
331.000	1.000	1686.000	2.000	43.000	3.000	3.000	ISA	MI	-2.000	0.271
333.000	6.000	964.000	1.000	39.000	6.000	3.000	ISA	GA	0.000	-0.696
342.000	5.000	2753.000	4.000	26.000	5.000	3.000	CON	AF	0.000	1.699
344.000	2.000	1845.000	3.000	8.000	3.000	3.000	CON	RW	-1.000	0.484
351.000	2.000	1137.000	2.000	17.000	5.000	3.000	DOT	MI	-3.000	-0.464
353.000	5.000	3045.000	4.000	10.000	4.000	3.000	DOT	GA	1.000	2.090
412.000	2.000	692.000	1.000	36.000	2.000	4.000	CHO	AF	0.000	-1.060
414.000	2.000	880.000	3.000	58.000	1.000	4.000	CHO	RW	1.000	-0.808
421.000	4.000	376.000	1.000	49.000	4.000	4.000	NOM	MI	0.000	-1.482
423.000	4.000	676.000	1.000	18.000	4.000	4.000	NOM	GA	0.000	-1.081
432.000	1.000	1233.000	1.000	35.000	1.000	4.000	ISA	AF	0.000	-0.335
434.000	1.000	1982.000	1.000	5.000	1.000	4.000	ISA	RW	0.000	0.667
441.000	2.000	868.000	1.000	15.000	2.000	4.000	CON	MI	0.000	-0.824
443.000	3.000	593.000	1.000	24.000	3.000	4.000	CON	GA	0.000	-1.192
452.000	2.000	3331.000	1.000	2.000	2.000	4.000	DOT	AF	0.000	2.472
454.000	4.000	1042.000	1.000	40.000	1.000	4.000	DOT	RW	3.000	-0.591
511.000	1.000	1911.000	2.000	51.000	1.000	5.000	CHO	MI	0.000	0.572
513.000	1.000	1198.000	1.000	47.000	1.000	5.000	CHO	GA	0.000	-0.382
522.000	1.000	1150.000	1.000	53.000	2.000	5.000	NOM	AF	-1.000	-0.447
524.000	2.000	1087.000	1.000	38.000	1.000	5.000	NOM	RW	1.000	-0.531
531.000	1.000	1114.000	1.000	21.000	1.000	5.000	ISA	MI	0.000	-0.495
533.000	1.000	2582.000	3.000	4.000	1.000	5.000	ISA	GA	0.000	1.470
542.000	2.000	1385.000	1.000	11.000	2.000	5.000	CON	AF	0.000	-0.132
544.000	2.000	1013.000	1.000	52.000	1.000	5.000	CON	RW	1.000	-0.630
551.000	1.000	896.000	2.000	46.000	1.000	5.000	DOT	MI	0.000	-0.787
553.000	3.000	1133.000	1.000	19.000	1.000	5.000	DOT	GA	2.000	-0.469

Table C.1 (continued) - Subject 135

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	5.000	1298.000	2.000	60.000	7.000	1.000	CHO	MI	-2.000	0.025
113.000	2.000	1377.000	2.000	18.000	6.000	1.000	CHO	GA	-4.000	0.126
122.000	1.000	939.000	2.000	9.000	3.000	1.000	NOM	AF	-2.000	-0.434
124.000	3.000	1597.000	2.000	41.000	4.000	1.000	NOM	RW	-1.000	0.408
131.000	6.000	2392.000	2.000	7.000	6.000	1.000	ISA	MI	0.000	1.425
133.000	4.000	1401.000	2.000	51.000	3.000	1.000	ISA	GA	1.000	0.157
142.000	1.000	1062.000	2.000	13.000	3.000	1.000	CON	AF	-2.000	-0.277
144.000	4.000	1793.000	2.000	3.000	4.000	1.000	CON	RW	0.000	0.658
151.000	8.000	993.000	1.000	43.000	8.000	1.000	DOT	MI	0.000	-0.365
153.000	8.000	4950.000	2.000	45.000	1.000	1.000	DOT	GA	7.000	4.697
212.100	3.000	776.000	1.000	34.000	3.000	2.100	CHO	AF	0.000	-0.642
212.200	1.000	850.000	2.000	37.000	1.000	2.200	CHO	AF	0.000	-0.548
214.100	5.000	569.000	1.000	57.000	5.000	2.100	CHO	RW	0.000	-0.907
214.200	6.000	33.000	2.000	59.000	1.000	2.200	CHO	RW	5.000	-1.593
221.100	6.000	1233.000	1.000	1.000	6.000	2.100	NOM	MI	0.000	-0.058
221.200	7.000	1595.000	1.000	53.000	2.000	2.200	NOM	MI	5.000	0.405
223.100	6.000	901.000	2.000	12.000	6.000	2.100	NOM	GA	0.000	-0.483
223.200	3.000	929.000	2.000	8.000	3.000	2.200	NOM	GA	0.000	-0.447
232.100	3.000	523.000	1.000	39.000	3.000	2.100	ISA	AF	0.000	-0.966
232.200	1.000	1461.000	2.000	36.000	1.000	2.200	ISA	AF	0.000	0.234
234.100	5.000	649.000	1.000	56.000	5.000	2.100	ISA	RW	0.000	-0.805
234.200	1.000	2338.000	2.000	10.000	1.000	2.200	ISA	RW	0.000	1.356
241.100	6.000	776.000	2.000	58.000	2.000	2.100	CON	MI	4.000	-0.642
241.200	2.000	1282.000	2.000	20.000	2.000	2.200	CON	MI	0.000	0.005
243.100	5.000	1530.000	2.000	15.000	5.000	2.100	CON	GA	0.000	0.322
243.200	3.000	1679.000	3.000	55.000	3.000	2.200	CON	GA	0.000	0.513
252.100	3.000	603.000	1.000	17.000	3.000	2.100	DOT	AF	0.000	-0.864
252.200	1.000	681.000	1.000	40.000	1.000	2.200	DOT	AF	0.000	-0.764
254.100	5.000	612.000	1.000	22.000	5.000	2.100	DOT	RW	0.000	-0.852
254.200	6.000	2025.000	3.000	54.000	1.000	2.200	DOT	RW	5.000	0.955
311.000	1.000	1440.000	2.000	32.000	1.000	3.000	CHO	MI	0.000	0.207
313.000	3.000	2187.000	1.000	21.000	4.000	3.000	CHO	GA	-1.000	1.162
322.000	1.000	947.000	1.000	33.000	1.000	3.000	NOM	AF	0.000	-0.424
324.000	4.000	1316.000	1.000	31.000	4.000	3.000	NOM	RW	0.000	0.048
331.000	3.000	3612.000	3.000	14.000	3.000	3.000	ISA	MI	0.000	2.985
333.000	3.000	1767.000	2.000	25.000	6.000	3.000	ISA	GA	-3.000	0.625
342.000	1.000	1819.000	2.000	28.000	5.000	3.000	CON	AF	-4.000	0.692
344.000	3.000	839.000	2.000	50.000	3.000	3.000	CON	RW	0.000	-0.562
351.000	4.000	1317.000	2.000	27.000	5.000	3.000	DOT	MI	-1.000	0.050
353.000	4.000	1380.000	1.000	6.000	4.000	3.000	DOT	GA	0.000	0.130
412.000	2.000	576.000	1.000	29.000	2.000	4.000	CHO	AF	0.000	-0.898
414.000	1.000	754.000	2.000	35.000	1.000	4.000	CHO	RW	0.000	-0.671
421.000	4.000	557.000	1.000	5.000	4.000	4.000	NOM	MI	0.000	-0.923
423.000	4.000	609.000	2.000	47.000	4.000	4.000	NOM	GA	0.000	-0.856
432.000	1.000	472.000	1.000	48.000	1.000	4.000	ISA	AF	0.000	-1.031
434.000	1.000	978.000	2.000	16.000	1.000	4.000	ISA	RW	0.000	-0.384
441.000	2.000	827.000	1.000	38.000	2.000	4.000	CON	MI	0.000	-0.577
443.000	3.000	1518.000	1.000	49.000	3.000	4.000	CON	GA	0.000	0.307
452.000	2.000	1291.000	1.000	11.000	2.000	4.000	DOT	AF	0.000	0.016
454.000	2.000	1350.000	2.000	4.000	1.000	4.000	DOT	RW	1.000	0.092
511.000	2.000	2776.000	3.000	46.000	1.000	5.000	CHO	MI	1.000	1.916
513.000	2.000	1098.000	2.000	2.000	1.000	5.000	CHO	GA	1.000	-0.231
522.000	1.000	1310.000	1.000	52.000	2.000	5.000	NOM	AF	-1.000	0.041
524.000	2.000	479.000	2.000	24.000	1.000	5.000	NOM	RW	1.000	-1.022
531.000	1.000	1010.000	2.000	44.000	1.000	5.000	ISA	MI	0.000	-0.343
533.000	1.000	1170.000	1.000	23.000	1.000	5.000	ISA	GA	0.000	-0.138
542.000	2.000	750.000	1.000	26.000	2.000	5.000	CON	AF	0.000	-0.676
544.000	2.000	1243.000	1.000	19.000	1.000	5.000	CON	RW	1.000	-0.045
551.000	1.000	1586.000	2.000	30.000	1.000	5.000	DOT	MI	0.000	0.394
553.000	2.000	868.000	1.000	42.000	1.000	5.000	DOT	GA	1.000	-0.525

Table C.1 (continued) - Subject 136

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	6.000	1223.000	2.000	36.000	7.000	1.000	CHO	MI	-1.000	0.460
113.000	3.000	1923.000	2.000	18.000	6.000	1.000	CHO	GA	-3.000	1.730
122.000	3.000	840.000	2.000	45.000	3.000	1.000	NOM	AF	0.000	-0.235
124.000	3.000	690.000	2.000	21.000	4.000	1.000	NOM	RW	-1.000	-0.508
131.000	5.000	1101.000	2.000	42.000	6.000	1.000	ISA	MI	-1.000	0.238
133.000	3.000	982.000	2.000	41.000	3.000	1.000	ISA	GA	0.000	0.022
142.000	3.000	805.000	2.000	26.000	3.000	1.000	CON	AF	0.000	-0.299
144.000	3.000	691.000	2.000	40.000	4.000	1.000	CON	RW	-1.000	-0.506
151.000	7.000	766.000	2.000	37.000	8.000	1.000	DOT	MI	-1.000	-0.370
153.000	7.000	1083.000	2.000	52.000	1.000	1.000	DOT	GA	6.000	0.205
212.100	3.000	316.000	1.000	32.000	3.000	2.100	CHO	AF	0.000	-1.186
212.200	1.000	2401.000	1.000	6.000	1.000	2.200	CHO	AF	0.000	2.597
214.100	5.000	373.000	1.000	33.000	5.000	2.100	CHO	RW	0.000	-1.083
214.200	1.000	1120.000	2.000	48.000	1.000	2.200	CHO	RW	0.000	0.273
221.100	6.000	570.000	1.000	56.000	6.000	2.100	NOM	MI	0.000	-0.725
221.200	8.000	1171.000	1.000	7.000	2.000	2.200	NOM	MI	6.000	0.365
223.100	6.000	1310.000	1.000	1.000	6.000	2.100	NOM	GA	0.000	0.617
223.200	3.000	571.000	1.000	14.000	3.000	2.200	NOM	GA	0.000	-0.724
232.100	3.000	858.000	1.000	12.000	3.000	2.100	ISA	AF	0.000	-0.203
232.200	1.000	981.000	1.000	20.000	1.000	2.200	ISA	AF	0.000	0.020
234.100	5.000	686.000	1.000	9.000	5.000	2.100	ISA	RW	0.000	-0.515
234.200	6.000	968.000	1.000	4.000	1.000	2.200	ISA	RW	5.000	-0.003
241.100	5.000	2382.000	2.000	30.000	2.000	2.100	CON	MI	3.000	2.563
241.200	2.000	833.000	1.000	29.000	2.000	2.200	CON	MI	0.000	-0.248
243.100	5.000	541.000	2.000	43.000	5.000	2.100	CON	GA	0.000	-0.778
243.200	3.000	1280.000	2.000	35.000	3.000	2.200	CON	GA	0.000	0.563
252.100	3.000	417.000	1.000	2.000	3.000	2.100	DOT	AF	0.000	-1.003
252.200	1.000	633.000	1.000	24.000	1.000	2.200	DOT	AF	0.000	-0.611
254.100	5.000	609.000	1.000	57.000	5.000	2.100	DOT	RW	0.000	-0.655
254.200	6.000	1128.000	2.000	38.000	1.000	2.200	DOT	RW	5.000	0.287
311.000	1.000	1253.000	1.000	60.000	1.000	3.000	CHO	MI	0.000	0.514
313.000	4.000	903.000	2.000	46.000	4.000	3.000	CHO	GA	0.000	-0.121
322.000	1.000	1140.000	1.000	49.000	1.000	3.000	NOM	AF	0.000	0.309
324.000	4.000	389.000	1.000	59.000	4.000	3.000	NOM	RW	0.000	-1.054
331.000	3.000	336.000	1.000	50.000	3.000	3.000	ISA	MI	0.000	-1.150
333.000	6.000	793.000	1.000	15.000	6.000	3.000	ISA	GA	0.000	-0.321
342.000	5.000	701.000	1.000	23.000	5.000	3.000	CON	AF	0.000	-0.488
344.000	3.000	1180.000	2.000	13.000	3.000	3.000	CON	RW	0.000	0.382
351.000	2.000	970.000	2.000	28.000	5.000	3.000	DOT	MI	-3.000	0.000
353.000	4.000	1427.000	3.000	31.000	4.000	3.000	DOT	GA	0.000	0.830
412.000	2.000	219.000	1.000	58.000	2.000	4.000	CHO	AF	0.000	-1.362
414.000	1.000	1421.000	2.000	8.000	1.000	4.000	CHO	RW	0.000	0.819
421.000	4.000	998.000	2.000	19.000	4.000	4.000	NOM	MI	0.000	0.051
423.000	4.000	660.000	2.000	22.000	4.000	4.000	NOM	GA	0.000	-0.562
432.000	1.000	575.000	1.000	17.000	1.000	4.000	ISA	AF	0.000	-0.716
434.000	1.000	583.000	1.000	5.000	1.000	4.000	ISA	RW	0.000	-0.702
441.000	2.000	437.000	1.000	44.000	2.000	4.000	CON	MI	0.000	-0.967
443.000	3.000	401.000	1.000	55.000	3.000	4.000	CON	GA	0.000	-1.032
452.000	2.000	618.000	2.000	47.000	2.000	4.000	DOT	AF	0.000	-0.638
454.000	4.000	838.000	2.000	3.000	1.000	4.000	DOT	RW	3.000	-0.239
511.000	1.000	1855.000	2.000	25.000	1.000	5.000	CHO	MI	0.000	1.606
513.000	1.000	712.000	1.000	27.000	1.000	5.000	CHO	GA	0.000	-0.468
522.000	1.000	1541.000	2.000	39.000	2.000	5.000	NOM	AF	-1.000	1.037
524.000	2.000	1111.000	2.000	34.000	1.000	5.000	NOM	RW	1.000	0.256
531.000	1.000	733.000	1.000	16.000	1.000	5.000	ISA	MI	0.000	-0.430
533.000	1.000	1323.000	2.000	53.000	1.000	5.000	ISA	GA	0.000	0.641
542.000	2.000	653.000	1.000	51.000	2.000	5.000	CON	AF	0.000	-0.575
544.000	2.000	1097.000	1.000	10.000	1.000	5.000	CON	RW	1.000	0.231
551.000	1.000	711.000	1.000	11.000	1.000	5.000	DOT	MI	0.000	-0.470
553.000	2.000	3356.000	3.000	54.000	1.000	5.000	DOT	GA	1.000	4.330

Table C.1 (continued) - Subject 137

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	5.000	4622.000	3.000	56.000	7.000	1.000	CHO	MI	-2.000	3.909
113.000	7.000	1057.000	4.000	51.000	6.000	1.000	CHO	GA	1.000	-0.246
122.000	3.000	1058.000	3.000	34.000	3.000	1.000	NOM	AF	0.000	-0.245
124.000	3.000	1018.000	3.000	44.000	4.000	1.000	NOM	RW	-1.000	-0.291
131.000	5.000	2115.000	2.000	5.000	6.000	1.000	ISA	MI	-1.000	0.987
133.000	3.000	1675.000	2.000	33.000	3.000	1.000	ISA	GA	0.000	0.474
142.000	4.000	1459.000	3.000	9.000	3.000	1.000	CON	AF	1.000	0.223
144.000	3.000	677.000	3.000	22.000	4.000	1.000	CON	RW	-1.000	-0.689
151.000	4.000	1271.000	4.000	59.000	8.000	1.000	DOT	MI	-4.000	0.004
153.000	4.000	3793.000	4.000	58.000	1.000	1.000	DOT	GA	3.000	2.943
212.100	3.000	406.000	1.000	11.000	3.000	2.100	CHO	AF	0.000	-1.005
212.200	4.000	950.000	1.000	29.000	1.000	2.200	CHO	AF	3.000	-0.371
214.100	5.000	660.000	1.000	27.000	5.000	2.100	CHO	RW	0.000	-0.709
214.200	4.000	1154.000	1.000	24.000	1.000	2.200	CHO	RW	3.000	-0.133
221.100	6.000	644.000	1.000	21.000	6.000	2.100	NOM	MI	0.000	-0.727
221.200	2.000	885.000	1.000	19.000	2.000	2.200	NOM	MI	0.000	-0.446
223.100	6.000	1409.000	1.000	6.000	6.000	2.100	NOM	GA	0.000	0.164
223.200	3.000	722.000	1.000	43.000	3.000	2.200	NOM	GA	0.000	-0.636
232.100	3.000	536.000	1.000	17.000	3.000	2.100	ISA	AF	0.000	-0.853
232.200	4.000	729.000	1.000	35.000	1.000	2.200	ISA	AF	3.000	-0.628
234.100	5.000	748.000	1.000	12.000	5.000	2.100	ISA	RW	0.000	-0.606
234.200	6.000	1480.000	1.000	41.000	1.000	2.200	ISA	RW	5.000	0.247
241.100	2.000	861.000	1.000	8.000	2.000	2.100	CON	MI	0.000	-0.474
241.200	2.000	1524.000	1.000	54.000	2.000	2.200	CON	MI	0.000	0.298
243.100	5.000	782.000	1.000	3.000	5.000	2.100	CON	GA	0.000	-0.566
243.200	3.000	1700.000	1.000	14.000	3.000	2.200	CON	GA	0.000	0.504
252.100	3.000	447.000	1.000	39.000	3.000	2.100	DOT	AF	0.000	-0.957
252.200	1.000	1701.000	1.000	10.000	1.000	2.200	DOT	AF	0.000	0.505
254.100	5.000	1063.000	2.000	60.000	5.000	2.100	DOT	RW	0.000	-0.239
254.200	4.000	972.000	1.000	46.000	1.000	2.200	DOT	RW	3.000	-0.345
311.000	1.000	3222.000	2.000	7.000	1.000	3.000	CHO	MI	0.000	2.277
313.000	4.000	2341.000	2.000	4.000	4.000	3.000	CHO	GA	0.000	1.251
322.000	4.000	1150.000	2.000	48.000	1.000	3.000	NOM	AF	3.000	-0.137
324.000	4.000	1747.000	2.000	23.000	4.000	3.000	NOM	RW	0.000	0.558
331.000	3.000	3385.000	3.000	42.000	3.000	3.000	ISA	MI	0.000	2.467
333.000	6.000	2116.000	2.000	45.000	6.000	3.000	ISA	GA	0.000	0.988
342.000	5.000	1592.000	2.000	31.000	5.000	3.000	CON	AF	0.000	0.378
344.000	3.000	804.000	2.000	50.000	3.000	3.000	CON	RW	0.000	-0.541
351.000	4.000	1973.000	2.000	18.000	5.000	3.000	DOT	MI	-1.000	0.822
353.000	4.000	1863.000	2.000	26.000	4.000	3.000	DOT	GA	0.000	0.693
412.000	2.000	356.000	1.000	28.000	2.000	4.000	CHO	AF	0.000	-1.063
414.000	1.000	1095.000	2.000	25.000	1.000	4.000	CHO	RW	0.000	-0.202
421.000	4.000	343.000	1.000	49.000	4.000	4.000	NOM	MI	0.000	-1.078
423.000	4.000	530.000	1.000	47.000	4.000	4.000	NOM	GA	0.000	-0.860
432.000	1.000	410.000	1.000	57.000	1.000	4.000	ISA	AF	0.000	-1.000
434.000	1.000	561.000	1.000	55.000	1.000	4.000	ISA	RW	0.000	-0.824
441.000	2.000	375.000	1.000	30.000	2.000	4.000	CON	MI	0.000	-1.041
443.000	3.000	281.000	1.000	52.000	3.000	4.000	CON	GA	0.000	-1.150
452.000	2.000	1009.000	2.000	16.000	2.000	4.000	DOT	AF	0.000	-0.302
454.000	4.000	616.000	2.000	20.000	1.000	4.000	DOT	RW	3.000	-0.760
511.000	1.000	1356.000	3.000	38.000	1.000	5.000	CHO	MI	0.000	0.103
513.000	1.000	1598.000	2.000	1.000	1.000	5.000	CHO	GA	0.000	0.385
522.000	2.000	1040.000	1.000	37.000	2.000	5.000	NOM	AF	0.000	-0.266
524.000	2.000	794.000	2.000	2.000	1.000	5.000	NOM	RW	1.000	-0.552
531.000	1.000	918.000	2.000	36.000	1.000	5.000	ISA	MI	0.000	-0.408
533.000	1.000	913.000	2.000	32.000	1.000	5.000	ISA	GA	0.000	-0.414
542.000	2.000	779.000	2.000	53.000	2.000	5.000	CON	AF	0.000	-0.570
544.000	2.000	1921.000	2.000	13.000	1.000	5.000	CON	RW	1.000	0.761
551.000	1.000	796.000	2.000	40.000	1.000	5.000	DOT	MI	0.000	-0.550
553.000	2.000	2075.000	3.000	15.000	1.000	5.000	DOT	GA	1.000	0.941

Table C.1 (continued) - Subject 138

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	6.000	861.000	2.000	48.000	7.000	1.000	CHO	MI	-1.000	-0.378
113.000	8.000	921.000	2.000	49.000	6.000	1.000	CHO	GA	2.000	-0.289
122.000	3.000	1785.000	2.000	28.000	3.000	1.000	NOM	AF	0.000	0.980
124.000	3.000	1561.000	2.000	1.000	4.000	1.000	NOM	RW	-1.000	0.651
131.000	6.000	741.000	1.000	43.000	6.000	1.000	ISA	MI	0.000	-0.554
133.000	6.000	1762.000	2.000	15.000	3.000	1.000	ISA	GA	3.000	0.946
142.000	4.000	1757.000	2.000	5.000	3.000	1.000	CON	AF	1.000	0.939
144.000	4.000	1116.000	2.000	59.000	4.000	1.000	CON	RW	0.000	-0.003
151.000	8.000	916.000	2.000	24.000	8.000	1.000	DOT	MI	0.000	-0.297
153.000	2.000	1636.000	2.000	38.000	1.000	1.000	DOT	GA	1.000	0.761
212.100	3.000	763.000	1.000	16.000	3.000	2.100	CHO	AF	0.000	-0.522
212.200	4.000	1342.000	2.000	10.000	1.000	2.200	CHO	AF	3.000	0.329
214.100	5.000	424.000	1.000	47.000	5.000	2.100	CHO	RW	0.000	-1.020
214.200	6.000	1017.000	1.000	25.000	1.000	2.200	CHO	RW	5.000	-0.148
221.100	6.000	672.000	1.000	40.000	6.000	2.100	NOM	MI	0.000	-0.655
221.200	8.000	2519.000	2.000	9.000	2.000	2.200	NOM	MI	6.000	2.058
223.100	6.000	759.000	1.000	44.000	6.000	2.100	NOM	GA	0.000	-0.527
223.200	3.000	974.000	1.000	45.000	3.000	2.200	NOM	GA	0.000	-0.212
232.100	3.000	617.000	1.000	39.000	3.000	2.100	ISA	AF	0.000	-0.736
232.200	4.000	2796.000	1.000	6.000	1.000	2.200	ISA	AF	3.000	2.465
234.100	5.000	637.000	1.000	12.000	5.000	2.100	ISA	RW	0.000	-0.707
234.200	6.000	704.000	1.000	34.000	1.000	2.200	ISA	RW	5.000	-0.608
241.100	2.000	1355.000	1.000	4.000	2.000	2.100	CON	MI	0.000	0.348
241.200	4.000	1555.000	2.000	50.000	2.000	2.200	CON	MI	2.000	0.642
243.100	5.000	1343.000	2.000	52.000	5.000	2.100	CON	GA	0.000	0.331
243.200	7.000	1007.000	2.000	53.000	3.000	2.200	CON	GA	4.000	-0.163
252.100	3.000	1119.000	1.000	17.000	3.000	2.100	DOT	AF	0.000	0.002
252.200	1.000	697.000	1.000	30.000	1.000	2.200	DOT	AF	0.000	-0.618
254.100	5.000	903.000	1.000	41.000	5.000	2.100	DOT	RW	0.000	-0.316
254.200	6.000	894.000	1.000	26.000	1.000	2.200	DOT	RW	5.000	-0.329
311.000	1.000	1488.000	1.000	29.000	1.000	3.000	CHO	MI	0.000	0.544
313.000	3.000	4773.000	1.000	2.000	4.000	3.000	CHO	GA	-1.000	5.370
322.000	4.000	1033.000	1.000	56.000	1.000	3.000	NOM	AF	3.000	-0.125
324.000	2.000	807.000	1.000	13.000	4.000	3.000	NOM	RW	-2.000	-0.457
331.000	3.000	922.000	1.000	37.000	3.000	3.000	ISA	MI	0.000	-0.288
333.000	6.000	1940.000	1.000	3.000	6.000	3.000	ISA	GA	0.000	1.208
342.000	5.000	661.000	1.000	57.000	5.000	3.000	CON	AF	0.000	-0.671
344.000	3.000	1538.000	2.000	46.000	3.000	3.000	CON	RW	0.000	0.617
351.000	2.000	684.000	1.000	36.000	5.000	3.000	DOT	MI	-3.000	-0.638
353.000	4.000	657.000	1.000	23.000	4.000	3.000	DOT	GA	0.000	-0.677
412.000	2.000	511.000	1.000	14.000	2.000	4.000	CHO	AF	0.000	-0.892
414.000	1.000	855.000	2.000	55.000	1.000	4.000	CHO	RW	0.000	-0.386
421.000	4.000	735.000	1.000	18.000	4.000	4.000	NOM	MI	0.000	-0.563
423.000	4.000	432.000	1.000	35.000	4.000	4.000	NOM	GA	0.000	-1.008
432.000	1.000	568.000	1.000	58.000	1.000	4.000	ISA	AF	0.000	-0.808
434.000	1.000	579.000	1.000	21.000	1.000	4.000	ISA	RW	0.000	-0.792
441.000	2.000	598.000	1.000	32.000	2.000	4.000	CON	MI	0.000	-0.764
443.000	3.000	1026.000	1.000	33.000	3.000	4.000	CON	GA	0.000	-0.135
452.000	2.000	917.000	2.000	54.000	2.000	4.000	DOT	AF	0.000	-0.295
454.000	2.000	635.000	2.000	19.000	1.000	4.000	DOT	RW	1.000	-0.710
511.000	1.000	998.000	2.000	22.000	1.000	5.000	CHO	MI	0.000	-0.176
513.000	1.000	469.000	2.000	27.000	1.000	5.000	CHO	GA	0.000	-0.953
522.000	2.000	1390.000	2.000	42.000	2.000	5.000	NOM	AF	0.000	0.400
524.000	2.000	1158.000	2.000	51.000	1.000	5.000	NOM	RW	1.000	0.059
531.000	1.000	936.000	1.000	20.000	1.000	5.000	ISA	MI	0.000	-0.267
533.000	2.000	1395.000	2.000	11.000	1.000	5.000	ISA	GA	1.000	0.407
542.000	2.000	1404.000	1.000	8.000	2.000	5.000	CON	AF	0.000	0.420
544.000	2.000	783.000	2.000	60.000	1.000	5.000	CON	RW	1.000	-0.492
551.000	1.000	748.000	1.000	7.000	1.000	5.000	DOT	MI	0.000	-0.544
553.000	2.000	1285.000	2.000	31.000	1.000	5.000	DOT	GA	1.000	0.245

Table C.1 (continued) - Subject 139

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	5.000	748.000	2.000	19.000	7.000	1.000	CHO	MI	-2.000	-0.866
113.000	7.000	2233.000	2.000	37.000	6.000	1.000	CHO	GA	1.000	0.734
122.000	2.000	1370.000	1.000	34.000	3.000	1.000	NOM	AF	-1.000	-0.196
124.000	4.000	1609.000	1.000	7.000	4.000	1.000	NOM	RW	0.000	0.062
131.000	8.000	1697.000	1.000	4.000	6.000	1.000	ISA	MI	2.000	0.156
133.000	3.000	2766.000	2.000	12.000	3.000	1.000	ISA	GA	0.000	1.308
142.000	8.000	2943.000	2.000	5.000	3.000	1.000	CON	AF	5.000	1.499
144.000	5.000	2169.000	2.000	2.000	4.000	1.000	CON	RW	1.000	0.665
151.000	6.000	1199.000	2.000	27.000	8.000	1.000	DOT	MI	-2.000	-0.380
153.000	8.000	1442.000	2.000	40.000	1.000	1.000	DOT	GA	7.000	-0.118
212.100	3.000	547.000	1.000	49.000	3.000	2.100	CHO	AF	0.000	-1.082
212.200	4.000	830.000	1.000	55.000	1.000	2.200	CHO	AF	3.000	-0.778
214.100	5.000	2969.000	1.000	1.000	5.000	2.100	CHO	RW	0.000	1.527
214.200	6.000	2467.000	2.000	28.000	1.000	2.200	CHO	RW	5.000	0.986
221.100	6.000	806.000	1.000	35.000	6.000	2.100	NOM	MI	0.000	-0.803
221.200	2.000	1783.000	1.000	32.000	2.000	2.200	NOM	MI	0.000	0.249
223.100	6.000	1091.000	1.000	24.000	6.000	2.100	NOM	GA	0.000	-0.496
223.200	3.000	818.000	1.000	14.000	3.000	2.200	NOM	GA	0.000	-0.791
232.100	3.000	576.000	1.000	45.000	3.000	2.100	ISA	AF	0.000	-1.051
232.200	4.000	934.000	1.000	38.000	1.000	2.200	ISA	AF	3.000	-0.666
234.100	5.000	560.000	2.000	54.000	5.000	2.100	ISA	RW	0.000	-1.068
234.200	6.000	1182.000	2.000	48.000	1.000	2.200	ISA	RW	5.000	-0.398
241.100	6.000	2433.000	2.000	16.000	2.000	2.100	CON	MI	4.000	0.949
241.200	2.000	2143.000	1.000	46.000	2.000	2.200	CON	MI	0.000	0.637
243.100	5.000	1023.000	2.000	52.000	5.000	2.100	CON	GA	0.000	-0.570
243.200	3.000	2861.000	2.000	6.000	3.000	2.200	CON	GA	0.000	1.411
252.100	3.000	484.000	1.000	29.000	3.000	2.100	DOT	AF	0.000	-1.150
252.200	8.000	1493.000	4.000	41.000	1.000	2.200	DOT	AF	7.000	-0.063
254.100	5.000	711.000	1.000	10.000	5.000	2.100	DOT	RW	0.000	-0.906
254.200	6.000	1282.000	3.000	50.000	1.000	2.200	DOT	RW	5.000	-0.291
311.000	3.000	2750.000	2.000	18.000	1.000	3.000	CHO	MI	2.000	1.291
313.000	3.000	1543.000	1.000	51.000	4.000	3.000	CHO	GA	-1.000	-0.009
322.000	3.000	1410.000	2.000	26.000	1.000	3.000	NOM	AF	2.000	-0.153
324.000	2.000	2129.000	1.000	11.000	4.000	3.000	NOM	RW	-2.000	0.622
331.000	1.000	1478.000	2.000	42.000	3.000	3.000	ISA	MI	-2.000	-0.079
333.000	6.000	1381.000	1.000	22.000	6.000	3.000	ISA	GA	0.000	-0.184
342.000	5.000	2394.000	2.000	43.000	5.000	3.000	CON	AF	0.000	0.907
344.000	6.000	5644.000	2.000	39.000	3.000	3.000	CON	RW	3.000	4.409
351.000	2.000	1717.000	3.000	25.000	5.000	3.000	DOT	MI	-3.000	0.178
353.000	4.000	2360.000	3.000	44.000	4.000	3.000	DOT	GA	0.000	0.871
412.000	2.000	1348.000	1.000	3.000	2.000	4.000	CHO	AF	0.000	-0.220
414.000	1.000	2751.000	2.000	13.000	1.000	4.000	CHO	RW	0.000	1.292
421.000	4.000	400.000	1.000	59.000	4.000	4.000	NOM	MI	0.000	-1.241
423.000	4.000	407.000	1.000	60.000	4.000	4.000	NOM	GA	0.000	-1.233
432.000	1.000	389.000	1.000	58.000	1.000	4.000	ISA	AF	0.000	-1.253
434.000	1.000	1098.000	1.000	23.000	1.000	4.000	ISA	RW	0.000	-0.489
441.000	2.000	725.000	1.000	21.000	2.000	4.000	CON	MI	0.000	-0.891
443.000	3.000	1992.000	1.000	33.000	3.000	4.000	CON	GA	0.000	0.474
452.000	2.000	2892.000	2.000	17.000	2.000	4.000	DOT	AF	0.000	1.444
454.000	2.000	437.000	2.000	57.000	1.000	4.000	DOT	RW	1.000	-1.201
511.000	2.000	2050.000	2.000	30.000	1.000	5.000	CHO	MI	1.000	0.537
513.000	1.000	861.000	1.000	20.000	1.000	5.000	CHO	GA	0.000	-0.744
522.000	3.000	988.000	2.000	36.000	2.000	5.000	NOM	AF	1.000	-0.607
524.000	2.000	1479.000	2.000	15.000	1.000	5.000	NOM	RW	1.000	-0.078
531.000	1.000	1977.000	2.000	8.000	1.000	5.000	ISA	MI	0.000	0.458
533.000	1.000	728.000	1.000	47.000	1.000	5.000	ISA	GA	0.000	-0.887
542.000	2.000	1240.000	2.000	53.000	2.000	5.000	CON	AF	0.000	-0.336
544.000	2.000	1408.000	2.000	31.000	1.000	5.000	CON	RW	1.000	-0.155
551.000	1.000	1350.000	2.000	9.000	1.000	5.000	DOT	MI	0.000	-0.217
553.000	2.000	611.000	1.000	56.000	1.000	5.000	DOT	GA	1.000	-1.014

Table C.1 (continued) - Subject 1101

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	5.000	829.000	2.000	56.000	7.000	1.000	CHO	MI	-2.000	-0.003
113.000	4.000	1001.000	2.000	22.000	6.000	1.000	CHO	GA	-2.000	0.500
122.000	2.000	729.000	1.000	1.000	3.000	1.000	NOM	AF	-1.000	-0.294
124.000	2.000	667.000	2.000	33.000	4.000	1.000	NOM	RW	-2.000	-0.475
131.000	7.000	1008.000	2.000	25.000	6.000	1.000	ISA	MI	1.000	0.520
133.000	3.000	1786.000	2.000	50.000	3.000	1.000	ISA	GA	0.000	2.791
142.000	2.000	809.000	2.000	55.000	3.000	1.000	CON	AF	-1.000	-0.061
144.000	2.000	993.000	2.000	7.000	4.000	1.000	CON	RW	-2.000	0.476
151.000	8.000	494.000	2.000	41.000	8.000	1.000	DOT	MI	0.000	-0.980
153.000	4.000	1110.000	3.000	15.000	1.000	1.000	DOT	GA	3.000	0.818
212.100	3.000	577.000	1.000	13.000	3.000	2.100	CHO	AF	0.000	-0.738
212.200	4.000	810.000	1.000	21.000	1.000	2.200	CHO	AF	3.000	-0.058
214.100	5.000	987.000	1.000	3.000	5.000	2.100	CHO	RW	0.000	0.459
214.200	6.000	626.000	2.000	40.000	1.000	2.200	CHO	RW	5.000	-0.595
221.100	6.000	566.000	1.000	43.000	6.000	2.100	NOM	MI	0.000	-0.770
221.200	4.000	441.000	1.000	54.000	2.000	2.200	NOM	MI	2.000	-1.135
223.100	5.000	1770.000	1.000	4.000	6.000	2.100	NOM	GA	-1.000	2.744
223.200	3.000	669.000	1.000	47.000	3.000	2.200	NOM	GA	0.000	-0.470
232.100	3.000	882.000	1.000	2.000	3.000	2.100	ISA	AF	0.000	0.152
232.200	4.000	1414.000	2.000	12.000	1.000	2.200	ISA	AF	3.000	1.705
234.100	5.000	452.000	1.000	42.000	5.000	2.100	ISA	RW	0.000	-1.103
234.200	6.000	1042.000	2.000	37.000	1.000	2.200	ISA	RW	5.000	0.619
241.100	6.000	1001.000	2.000	17.000	2.000	2.100	CON	MI	4.000	0.500
241.200	4.000	735.000	1.000	51.000	2.000	2.200	CON	MI	2.000	-0.277
243.100	6.000	674.000	2.000	30.000	5.000	2.100	CON	GA	1.000	-0.455
243.200	8.000	572.000	1.000	60.000	3.000	2.200	CON	GA	5.000	-0.753
252.100	3.000	656.000	1.000	11.000	3.000	2.100	DOT	AF	0.000	-0.508
252.200	4.000	539.000	1.000	59.000	1.000	2.200	DOT	AF	3.000	-0.849
254.100	5.000	484.000	1.000	53.000	5.000	2.100	DOT	RW	0.000	-1.010
254.200	6.000	544.000	1.000	49.000	1.000	2.200	DOT	RW	5.000	-0.834
311.000	4.000	984.000	2.000	46.000	1.000	3.000	CHO	MI	3.000	0.450
313.000	4.000	1220.000	2.000	52.000	4.000	3.000	CHO	GA	0.000	1.139
322.000	4.000	1175.000	2.000	27.000	1.000	3.000	NOM	AF	3.000	1.007
324.000	4.000	648.000	1.000	45.000	4.000	3.000	NOM	RW	0.000	-0.531
331.000	4.000	1078.000	1.000	48.000	3.000	3.000	ISA	MI	1.000	0.724
333.000	6.000	893.000	2.000	16.000	6.000	3.000	ISA	GA	0.000	0.184
342.000	5.000	1039.000	1.000	38.000	5.000	3.000	CON	AF	0.000	0.610
344.000	3.000	843.000	1.000	31.000	3.000	3.000	CON	RW	0.000	0.038
351.000	2.000	403.000	1.000	32.000	5.000	3.000	DOT	MI	-3.000	-1.246
353.000	5.000	1711.000	2.000	10.000	4.000	3.000	DOT	GA	1.000	2.572
412.000	2.000	464.000	1.000	58.000	2.000	4.000	CHO	AF	0.000	-1.068
414.000	1.000	1041.000	1.000	36.000	1.000	4.000	CHO	RW	0.000	0.616
421.000	4.000	575.000	1.000	23.000	4.000	4.000	NOM	MI	0.000	-0.744
423.000	4.000	610.000	1.000	19.000	4.000	4.000	NOM	GA	0.000	-0.642
432.000	1.000	443.000	1.000	18.000	1.000	4.000	ISA	AF	0.000	-1.129
434.000	1.000	611.000	1.000	26.000	1.000	4.000	ISA	RW	0.000	-0.639
441.000	2.000	370.000	1.000	44.000	2.000	4.000	CON	MI	0.000	-1.342
443.000	3.000	684.000	1.000	5.000	3.000	4.000	CON	GA	0.000	-0.426
452.000	2.000	925.000	1.000	8.000	2.000	4.000	DOT	AF	0.000	0.278
454.000	4.000	814.000	2.000	20.000	1.000	4.000	DOT	RW	3.000	-0.046
511.000	3.000	1260.000	2.000	24.000	1.000	5.000	CHO	MI	2.000	1.256
513.000	1.000	955.000	1.000	14.000	1.000	5.000	CHO	GA	0.000	0.365
522.000	1.000	648.000	1.000	57.000	2.000	5.000	NOM	AF	-1.000	-0.531
524.000	2.000	600.000	1.000	39.000	1.000	5.000	NOM	RW	1.000	-0.671
531.000	3.000	1195.000	1.000	6.000	1.000	5.000	ISA	MI	2.000	1.066
533.000	1.000	1452.000	2.000	28.000	1.000	5.000	ISA	GA	0.000	1.816
542.000	2.000	486.000	1.000	35.000	2.000	5.000	CON	AF	0.000	-1.004
544.000	2.000	997.000	2.000	9.000	1.000	5.000	CON	RW	1.000	0.488
551.000	3.000	342.000	1.000	29.000	1.000	5.000	DOT	MI	2.000	-1.424
553.000	3.000	459.000	1.000	34.000	1.000	5.000	DOT	GA	2.000	-1.083

Table C.1 (continued) - Subject 1102 *

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	5.000	2444.000	3.000	32.000	7.000	1.000	CHO	MI	-2.000	0.202
113.000	7.000	2830.000	4.000	3.000	6.000	1.000	CHO	GA	1.000	0.513
122.000	3.000	2234.000	2.000	43.000	3.000	1.000	NOM	AF	0.000	0.033
124.000	5.000	4138.000	2.000	50.000	4.000	1.000	NOM	RW	1.000	1.567
131.000	6.000	2627.000	3.000	11.000	6.000	1.000	ISA	MI	0.000	0.350
133.000	5.000	4022.000	4.000	40.000	3.000	1.000	ISA	GA	2.000	1.473
142.000	2.000	1823.000	2.000	28.000	3.000	1.000	CON	AF	-1.000	-0.298
144.000	5.000	1434.000	2.000	55.000	4.000	1.000	CON	RW	1.000	-0.611
151.000	6.000	3384.000	3.000	1.000	8.000	1.000	DOT	MI	-2.000	0.960
153.000	2.000	2970.000	4.000	8.000	1.000	1.000	DOT	GA	1.000	0.626
212.100	3.000	3310.000	1.000	12.000	3.000	2.100	CHO	AF	0.000	0.900
212.200	4.000	1500.000	1.000	20.000	1.000	2.200	CHO	AF	3.000	-0.558
214.100	5.000	1826.000	1.000	17.000	5.000	2.100	CHO	RW	0.000	-0.295
214.200	1.000	3350.000	2.000	21.000	1.000	2.200	CHO	RW	0.000	0.932
221.100	6.000	1546.000	1.000	19.000	6.000	2.100	NOM	MI	0.000	-0.521
221.200	2.000	2032.000	2.000	52.000	2.000	2.200	NOM	MI	0.000	-0.129
223.100	6.000	1643.000	1.000	35.000	6.000	2.100	NOM	GA	0.000	-0.443
223.200	3.000	987.000	1.000	16.000	3.000	2.200	NOM	GA	0.000	-0.971
232.100	3.000	1370.000	1.000	15.000	3.000	2.100	ISA	AF	0.000	-0.663
232.200	4.000	598.000	1.000	33.000	1.000	2.200	ISA	AF	3.000	-1.284
234.100	5.000	1264.000	1.000	42.000	5.000	2.100	ISA	RW	0.000	-0.748
234.200	4.000	1207.000	1.000	60.000	1.000	2.200	ISA	RW	3.000	-0.794
241.100	2.000	1502.000	2.000	37.000	2.000	2.100	CON	MI	0.000	-0.556
241.200	4.000	1439.000	1.000	57.000	2.000	2.200	CON	MI	2.000	-0.607
243.100	5.000	3759.000	3.000	56.000	5.000	2.100	CON	GA	0.000	1.262
243.200	3.000	1692.000	2.000	14.000	3.000	2.200	CON	GA	0.000	-0.403
252.100	3.000	561.000	1.000	44.000	3.000	2.100	DOT	AF	0.000	-1.314
252.200	4.000	2379.000	1.000	22.000	1.000	2.200	DOT	AF	3.000	0.150
254.100	5.000	592.000	1.000	51.000	5.000	2.100	DOT	RW	0.000	-1.289
254.200	1.000	1719.000	2.000	41.000	1.000	2.200	DOT	RW	0.000	-0.381
311.000	1.000	4855.000	2.000	5.000	1.000	3.000	CHO	MI	0.000	2.144
313.000	6.000	3747.000	2.000	2.000	4.000	3.000	CHO	GA	2.000	1.252
322.000	4.000	4093.000	3.000	10.000	1.000	3.000	NOM	AF	3.000	1.531
324.000	4.000	955.000	1.000	47.000	4.000	3.000	NOM	RW	0.000	-0.997
331.000	3.000	3256.000	3.000	48.000	3.000	3.000	ISA	MI	0.000	0.856
333.000	6.000	3107.000	2.000	18.000	6.000	3.000	ISA	GA	0.000	0.736
342.000	5.000	4365.000	3.000	7.000	5.000	3.000	CON	AF	0.000	1.750
344.000	3.000	2246.000	2.000	27.000	3.000	3.000	CON	RW	0.000	0.043
351.000	4.000	1543.000	2.000	39.000	5.000	3.000	DOT	MI	-1.000	-0.523
353.000	6.000	1613.000	4.000	31.000	4.000	3.000	DOT	GA	2.000	-0.467
412.000	2.000	500.000	1.000	24.000	2.000	4.000	CHO	AF	0.000	-1.363
414.000	1.000	2735.000	2.000	34.000	1.000	4.000	CHO	RW	0.000	0.437
421.000	4.000	617.000	1.000	9.000	4.000	4.000	NOM	MI	0.000	-1.269
423.000	4.000	564.000	1.000	53.000	4.000	4.000	NOM	GA	0.000	-1.312
432.000	1.000	1466.000	1.000	6.000	1.000	4.000	ISA	AF	0.000	-0.585
434.000	1.000	1243.000	3.000	58.000	1.000	4.000	ISA	RW	0.000	-0.765
441.000	2.000	442.000	1.000	59.000	2.000	4.000	CON	MI	0.000	-1.410
443.000	3.000	446.000	1.000	46.000	3.000	4.000	CON	GA	0.000	-1.407
452.000	2.000	3822.000	1.000	25.000	2.000	4.000	DOT	AF	0.000	1.312
454.000	4.000	1407.000	4.000	49.000	1.000	4.000	DOT	RW	3.000	-0.633
511.000	3.000	5333.000	4.000	26.000	1.000	5.000	CHO	MI	2.000	2.529
513.000	1.000	2453.000	3.000	45.000	1.000	5.000	CHO	GA	0.000	0.210
522.000	2.000	2694.000	2.000	36.000	2.000	5.000	NOM	AF	0.000	0.404
524.000	2.000	1849.000	2.000	4.000	1.000	5.000	NOM	RW	1.000	-0.277
531.000	1.000	844.000	2.000	54.000	1.000	5.000	ISA	MI	0.000	-1.086
533.000	3.000	3504.000	3.000	38.000	1.000	5.000	ISA	GA	2.000	1.056
542.000	2.000	1253.000	2.000	30.000	2.000	5.000	CON	AF	0.000	-0.757
544.000	2.000	3790.000	4.000	23.000	1.000	5.000	CON	RW	1.000	1.287
551.000	1.000	3371.000	3.000	13.000	1.000	5.000	DOT	MI	0.000	0.949
553.000	1.000	1260.000	3.000	29.000	1.000	5.000	DOT	GA	0.000	-0.751

Table C.1 (continued) - Subject 1201

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	5.000	922.000	2.000	18.000	7.000	1.000	CHO	MI	-2.000	-0.618
113.000	4.000	1412.000	3.000	56.000	6.000	1.000	CHO	GA	-2.000	0.203
122.000	3.000	721.000	2.000	58.000	3.000	1.000	NOM	AF	0.000	-0.954
124.000	5.000	806.000	2.000	55.000	4.000	1.000	NOM	RW	1.000	-0.812
131.000	5.000	1300.000	1.000	2.000	6.000	1.000	ISA	MI	-1.000	0.016
133.000	5.000	1777.000	3.000	57.000	3.000	1.000	ISA	GA	2.000	0.815
142.000	4.000	1689.000	2.000	5.000	3.000	1.000	CON	AF	1.000	0.668
144.000	5.000	1964.000	2.000	21.000	4.000	1.000	CON	RW	1.000	1.128
151.000	6.000	1140.000	2.000	15.000	8.000	1.000	DOT	MI	-2.000	-0.252
153.000	5.000	2129.000	3.000	8.000	1.000	1.000	DOT	GA	4.000	1.405
212.100	3.000	825.000	1.000	42.000	3.000	2.100	CHO	AF	0.000	-0.780
212.200	4.000	978.000	2.000	60.000	1.000	2.200	CHO	AF	3.000	-0.524
214.100	5.000	888.000	1.000	19.000	5.000	2.100	CHO	RW	0.000	-0.674
214.200	1.000	1200.000	2.000	51.000	1.000	2.200	CHO	RW	0.000	-0.152
221.100	6.000	884.000	1.000	37.000	6.000	2.100	NOM	MI	0.000	-0.681
221.200	2.000	863.000	1.000	50.000	2.000	2.200	NOM	MI	0.000	-0.716
223.100	6.000	1102.000	1.000	29.000	6.000	2.100	NOM	GA	0.000	-0.316
223.200	3.000	820.000	2.000	24.000	3.000	2.200	NOM	GA	0.000	-0.788
232.100	3.000	726.000	1.000	38.000	3.000	2.100	ISA	AF	0.000	-0.946
232.200	1.000	834.000	1.000	59.000	1.000	2.200	ISA	AF	0.000	-0.765
234.100	5.000	864.000	1.000	36.000	5.000	2.100	ISA	RW	0.000	-0.715
234.200	1.000	2327.000	2.000	23.000	1.000	2.200	ISA	RW	0.000	1.736
241.100	2.000	1021.000	1.000	34.000	2.000	2.100	CON	MI	0.000	-0.452
241.200	2.000	1133.000	1.000	33.000	2.000	2.200	CON	MI	0.000	-0.264
243.100	6.000	1877.000	4.000	13.000	5.000	2.100	CON	GA	1.000	0.983
243.200	3.000	3358.000	2.000	1.000	3.000	2.200	CON	GA	0.000	3.464
252.100	3.000	821.000	1.000	9.000	3.000	2.100	DOT	AF	0.000	-0.787
252.200	1.000	651.000	1.000	41.000	1.000	2.200	DOT	AF	0.000	-1.072
254.100	5.000	609.000	2.000	47.000	5.000	2.100	DOT	RW	0.000	-1.142
254.200	6.000	1802.000	2.000	39.000	1.000	2.200	DOT	RW	5.000	0.857
311.000	1.000	1380.000	2.000	52.000	1.000	3.000	CHO	MI	0.000	0.150
313.000	6.000	1754.000	1.000	4.000	4.000	3.000	CHO	GA	2.000	0.776
322.000	4.000	1229.000	2.000	43.000	1.000	3.000	NOM	AF	3.000	-0.103
324.000	4.000	1661.000	1.000	40.000	4.000	3.000	NOM	RW	0.000	0.621
331.000	3.000	1737.000	2.000	11.000	3.000	3.000	ISA	MI	0.000	0.748
333.000	6.000	1307.000	2.000	49.000	6.000	3.000	ISA	GA	0.000	0.028
342.000	5.000	2784.000	1.000	28.000	5.000	3.000	CON	AF	0.000	2.502
344.000	6.000	1379.000	1.000	30.000	3.000	3.000	CON	RW	3.000	0.148
351.000	2.000	1319.000	1.000	44.000	5.000	3.000	DOT	MI	-3.000	0.048
353.000	2.000	2299.000	3.000	10.000	4.000	3.000	DOT	GA	-2.000	1.690
412.000	2.000	912.000	1.000	7.000	2.000	4.000	CHO	AF	0.000	-0.634
414.000	1.000	1539.000	2.000	14.000	1.000	4.000	CHO	RW	0.000	0.416
421.000	4.000	551.000	1.000	35.000	4.000	4.000	NOM	MI	0.000	-1.239
423.000	4.000	823.000	1.000	17.000	4.000	4.000	NOM	GA	0.000	-0.783
432.000	1.000	733.000	1.000	22.000	1.000	4.000	ISA	AF	0.000	-0.934
434.000	1.000	711.000	1.000	26.000	1.000	4.000	ISA	RW	0.000	-0.971
441.000	2.000	657.000	1.000	32.000	2.000	4.000	CON	MI	0.000	-1.061
443.000	3.000	774.000	1.000	3.000	3.000	4.000	CON	GA	0.000	-0.865
452.000	2.000	2038.000	2.000	12.000	2.000	4.000	DOT	AF	0.000	1.252
454.000	4.000	848.000	2.000	31.000	1.000	4.000	DOT	RW	3.000	-0.741
511.000	2.000	2543.000	3.000	46.000	1.000	5.000	CHO	MI	1.000	2.098
513.000	2.000	1678.000	2.000	20.000	1.000	5.000	CHO	GA	1.000	0.649
522.000	3.000	1902.000	2.000	53.000	2.000	5.000	NOM	AF	1.000	1.024
524.000	2.000	870.000	1.000	25.000	1.000	5.000	NOM	RW	1.000	-0.705
531.000	1.000	780.000	2.000	54.000	1.000	5.000	ISA	MI	0.000	-0.855
533.000	1.000	1188.000	1.000	48.000	1.000	5.000	ISA	GA	0.000	-0.172
542.000	2.000	1076.000	1.000	45.000	2.000	5.000	CON	AF	0.000	-0.359
544.000	1.000	1559.000	1.000	6.000	1.000	5.000	CON	RW	0.000	0.450
551.000	1.000	782.000	1.000	27.000	1.000	5.000	DOT	MI	0.000	-0.852
553.000	2.000	1178.000	2.000	16.000	1.000	5.000	DOT	GA	1.000	-0.189

Table C.1 (continued) - Subject 1301

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
111.000	7.000	2207.000	2.000	20.000	7.000	1.000	CHO	MI	0.000	0.866
113.000	8.000	2027.000	2.000	34.000	6.000	1.000	CHO	GA	2.000	0.651
122.000	4.000	1072.000	2.000	60.000	3.000	1.000	NOM	AF	1.000	-0.485
124.000	4.000	1614.000	2.000	1.000	4.000	1.000	NOM	RW	0.000	0.160
131.000	8.000	2181.000	2.000	31.000	6.000	1.000	ISA	MI	2.000	0.835
133.000	8.000	1814.000	1.000	2.000	3.000	1.000	ISA	GA	5.000	0.398
142.000	3.000	2049.000	2.000	22.000	3.000	1.000	CON	AF	0.000	0.678
144.000	4.000	1818.000	2.000	15.000	4.000	1.000	CON	RW	0.000	0.403
151.000	4.000	1601.000	2.000	28.000	8.000	1.000	DOT	MI	-4.000	0.145
153.000	1.000	2009.000	1.000	6.000	1.000	1.000	DOT	GA	0.000	0.630
212.100	3.000	884.000	1.000	30.000	3.000	2.100	CHO	AF	0.000	-0.708
212.200	1.000	1700.000	1.000	53.000	1.000	2.200	CHO	AF	0.000	0.262
214.100	5.000	583.000	1.000	37.000	5.000	2.100	CHO	RW	0.000	-1.066
214.200	3.000	4536.000	4.000	18.000	1.000	2.200	CHO	RW	2.000	3.636
221.100	2.000	1229.000	2.000	49.000	6.000	2.100	NOM	MI	-4.000	-0.298
221.200	2.000	1322.000	1.000	51.000	2.000	2.200	NOM	MI	0.000	-0.187
223.100	2.000	1869.000	1.000	38.000	6.000	2.100	NOM	GA	-4.000	0.463
223.200	3.000	1347.000	1.000	25.000	3.000	2.200	NOM	GA	0.000	-0.157
232.100	3.000	725.000	1.000	58.000	3.000	2.100	ISA	AF	0.000	-0.897
232.200	6.000	2121.000	2.000	39.000	1.000	2.200	ISA	AF	5.000	0.763
234.100	5.000	1064.000	1.000	12.000	5.000	2.100	ISA	RW	0.000	-0.494
234.200	3.000	2684.000	2.000	21.000	1.000	2.200	ISA	RW	2.000	1.433
241.100	2.000	883.000	2.000	59.000	2.000	2.100	CON	MI	0.000	-0.709
241.200	6.000	2557.000	2.000	32.000	2.000	2.200	CON	MI	4.000	1.282
243.100	2.000	1290.000	1.000	57.000	5.000	2.100	CON	GA	-3.000	-0.225
243.200	8.000	1007.000	4.000	52.000	3.000	2.200	CON	GA	5.000	-0.562
252.100	3.000	968.000	1.000	8.000	3.000	2.100	DOT	AF	0.000	-0.608
252.200	1.000	1572.000	1.000	26.000	1.000	2.200	DOT	AF	0.000	0.110
254.100	5.000	909.000	1.000	33.000	5.000	2.100	DOT	RW	0.000	-0.678
254.200	2.000	5049.000	1.000	35.000	1.000	2.200	DOT	RW	1.000	4.246
311.000	1.000	1605.000	1.000	40.000	1.000	3.000	CHO	MI	0.000	0.149
313.000	4.000	2711.000	1.000	9.000	4.000	3.000	CHO	GA	0.000	1.465
322.000	4.000	1938.000	1.000	10.000	1.000	3.000	NOM	AF	3.000	0.546
324.000	2.000	1174.000	1.000	46.000	4.000	3.000	NOM	RW	-2.000	-0.363
331.000	4.000	1314.000	1.000	4.000	3.000	3.000	ISA	MI	1.000	-0.197
333.000	3.000	1164.000	1.000	41.000	6.000	3.000	ISA	GA	-3.000	-0.375
342.000	5.000	650.000	1.000	29.000	5.000	3.000	CON	AF	0.000	-0.986
344.000	2.000	2125.000	1.000	7.000	3.000	3.000	CON	RW	-1.000	0.768
351.000	2.000	1274.000	1.000	36.000	5.000	3.000	DOT	MI	-3.000	-0.244
353.000	4.000	1938.000	1.000	19.000	4.000	3.000	DOT	GA	0.000	0.546
412.000	2.000	633.000	1.000	56.000	2.000	4.000	CHO	AF	0.000	-1.007
414.000	1.000	1087.000	1.000	3.000	1.000	4.000	CHO	RW	0.000	-0.467
421.000	4.000	560.000	1.000	5.000	4.000	4.000	NOM	MI	0.000	-1.094
423.000	4.000	1005.000	1.000	44.000	4.000	4.000	NOM	GA	0.000	-0.564
432.000	1.000	1104.000	1.000	27.000	1.000	4.000	ISA	AF	0.000	-0.446
434.000	1.000	1495.000	1.000	13.000	1.000	4.000	ISA	RW	0.000	0.019
441.000	2.000	479.000	1.000	42.000	2.000	4.000	CON	MI	0.000	-1.190
443.000	3.000	896.000	1.000	47.000	3.000	4.000	CON	GA	0.000	-0.694
452.000	1.000	1336.000	2.000	17.000	2.000	4.000	DOT	AF	-1.000	-0.171
454.000	4.000	1439.000	2.000	55.000	1.000	4.000	DOT	RW	3.000	-0.048
511.000	1.000	1140.000	1.000	14.000	1.000	5.000	CHO	MI	0.000	-0.404
513.000	1.000	1055.000	1.000	43.000	1.000	5.000	CHO	GA	0.000	-0.505
522.000	1.000	967.000	1.000	11.000	2.000	5.000	NOM	AF	-1.000	-0.609
524.000	1.000	740.000	1.000	16.000	1.000	5.000	NOM	RW	0.000	-0.879
531.000	2.000	1041.000	1.000	23.000	1.000	5.000	ISA	MI	1.000	-0.521
533.000	1.000	2217.000	2.000	48.000	1.000	5.000	ISA	GA	0.000	0.877
542.000	2.000	694.000	1.000	45.000	2.000	5.000	CON	AF	0.000	-0.934
544.000	2.000	631.000	1.000	50.000	1.000	5.000	CON	RW	1.000	-1.009
551.000	1.000	693.000	1.000	54.000	1.000	5.000	DOT	MI	0.000	-0.935
553.000	2.000	965.000	2.000	24.000	1.000	5.000	DOT	GA	1.000	-0.612

Table C.1 (continued) - Subject 210

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	1.000	772.000	1.000	48.000	1.000	1.000	CHO	AF	0.000	-0.950
121.000	6.000	1386.000	1.000	28.000	6.000	1.000	NOM	MI	0.000	0.542
123.000	4.000	774.000	1.000	2.000	5.000	1.000	NOM	GA	-1.000	-0.945
132.000	4.000	949.000	1.000	3.000	3.000	1.000	ISA	AF	1.000	-0.520
141.000	6.000	686.000	1.000	30.000	6.000	1.000	CON	MI	0.000	-1.159
143.000	4.000	2128.000	2.000	5.000	2.000	1.000	CON	GA	2.000	2.346
152.000	8.000	1361.000	1.000	52.000	1.000	1.000	DOT	AF	7.000	0.482
154.000	5.000	1438.000	2.000	7.000	1.000	1.000	DOT	RW	4.000	0.669
211.100	2.000	1334.000	1.000	50.000	2.000	2.100	CHO	MI	0.000	0.416
211.200	2.000	558.000	1.000	41.000	2.000	2.200	CHO	MI	0.000	-1.470
213.100	6.000	1438.000	2.000	13.000	5.000	2.100	CHO	GA	1.000	0.669
213.200	3.000	1532.000	1.000	19.000	3.000	2.200	CHO	GA	0.000	0.897
222.100	6.000	1061.000	1.000	43.000	6.000	2.100	NOM	AF	0.000	-0.248
222.200	4.000	1353.000	1.000	1.000	1.000	2.200	NOM	AF	3.000	0.462
224.100	6.000	1064.000	1.000	24.000	6.000	2.100	NOM	RW	0.000	-0.240
224.200	6.000	1395.000	1.000	38.000	1.000	2.200	NOM	RW	5.000	0.564
231.100	3.000	792.000	1.000	49.000	3.000	2.100	ISA	MI	0.000	-0.902
231.200	4.000	960.000	1.000	21.000	2.000	2.200	ISA	MI	2.000	-0.493
233.100	6.000	1133.000	1.000	47.000	5.000	2.100	ISA	GA	1.000	-0.073
233.200	3.000	1052.000	1.000	22.000	3.000	2.200	ISA	GA	0.000	-0.270
242.100	3.000	436.000	1.000	45.000	3.000	2.100	CON	AF	0.000	-1.767
242.200	4.000	1405.000	1.000	17.000	1.000	2.200	CON	AF	3.000	0.588
251.100	2.000	646.000	1.000	27.000	2.000	2.100	DOT	MI	0.000	-1.256
251.200	2.000	1400.000	1.000	8.000	2.000	2.200	DOT	MI	0.000	0.576
253.100	6.000	740.000	1.000	26.000	5.000	2.100	DOT	GA	1.000	-1.028
253.200	5.000	1581.000	1.000	56.000	3.000	2.200	DOT	GA	2.000	1.016
312.000	5.000	918.000	1.000	29.000	3.000	3.000	CHO	AF	2.000	-0.595
321.000	2.000	770.000	1.000	46.000	4.000	3.000	NOM	MI	-2.000	-0.955
323.000	2.000	1622.000	1.000	14.000	6.000	3.000	NOM	GA	-4.000	1.116
332.000	3.000	1507.000	1.000	18.000	3.000	3.000	ISA	AF	0.000	0.836
341.000	4.000	915.000	1.000	31.000	4.000	3.000	CON	MI	0.000	-0.603
343.000	2.000	865.000	1.000	39.000	2.000	3.000	CON	GA	0.000	-0.724
352.000	1.000	1453.000	1.000	4.000	4.000	3.000	DOT	AF	-3.000	0.705
354.000	6.000	1118.000	1.000	37.000	6.000	3.000	DOT	RW	0.000	-0.109
411.000	4.000	1891.000	1.000	10.000	2.000	4.000	CHO	MI	2.000	1.770
413.000	4.000	1594.000	1.000	33.000	1.000	4.000	CHO	GA	3.000	1.048
422.000	4.000	526.000	1.000	51.000	4.000	4.000	NOM	AF	0.000	-1.548
424.000	4.000	2030.000	1.000	59.000	4.000	4.000	NOM	RW	0.000	2.108
431.000	2.000	828.000	1.000	9.000	2.000	4.000	ISA	MI	0.000	-0.814
433.000	1.000	838.000	1.000	57.000	1.000	4.000	ISA	GA	0.000	-0.790
442.000	3.000	1034.000	1.000	25.000	3.000	4.000	CON	AF	0.000	-0.313
451.000	2.000	1047.000	1.000	34.000	2.000	4.000	DOT	MI	0.000	-0.282
453.000	1.000	946.000	1.000	6.000	1.000	4.000	DOT	GA	0.000	-0.527
512.000	2.000	1939.000	1.000	36.000	2.000	5.000	CHO	AF	0.000	1.887
521.000	1.000	1052.000	1.000	55.000	1.000	5.000	NOM	MI	0.000	-0.270
523.000	2.000	1314.000	2.000	23.000	1.000	5.000	NOM	GA	1.000	0.367
532.000	2.000	1008.000	1.000	20.000	2.000	5.000	ISA	AF	0.000	-0.377
541.000	1.000	1485.000	1.000	42.000	1.000	5.000	CON	MI	0.000	0.783
543.000	1.000	514.000	1.000	40.000	1.000	5.000	CON	GA	0.000	-1.577
552.000	2.000	911.000	1.000	35.000	2.000	5.000	DOT	AF	0.000	-0.612
554.000	2.000	1809.000	2.000	60.000	1.000	5.000	DOT	RW	1.000	1.571

Table C.1 (continued) - Subject 211

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	8.000	1041.000	3.000	46.000	1.000	1.000	CHO	AF	7.000	0.115
121.000	5.000	605.000	1.000	11.000	6.000	1.000	NOM	MI	-1.000	-0.901
123.000	5.000	1136.000	1.000	28.000	5.000	1.000	NOM	GA	0.000	0.337
132.000	3.000	1885.000	2.000	7.000	3.000	1.000	ISA	AF	0.000	2.083
141.000	6.000	903.000	1.000	4.000	6.000	1.000	CON	MI	0.000	-0.206
143.000	6.000	1781.000	2.000	2.000	2.000	1.000	CON	GA	4.000	1.841
152.000	5.000	952.000	2.000	39.000	1.000	1.000	DOT	AF	4.000	-0.092
154.000	7.000	1750.000	1.000	44.000	1.000	1.000	DOT	RW	6.000	1.769
211.100	2.000	532.000	1.000	52.000	2.000	2.100	CHO	MI	0.000	-1.071
211.200	2.000	719.000	1.000	31.000	2.000	2.200	CHO	MI	0.000	-0.635
213.100	5.000	1852.000	1.000	15.000	5.000	2.100	CHO	GA	0.000	2.006
213.200	7.000	1623.000	2.000	18.000	3.000	2.200	CHO	GA	4.000	1.473
222.100	4.000	1051.000	2.000	9.000	6.000	2.100	NOM	AF	-2.000	0.139
222.200	1.000	885.000	2.000	43.000	1.000	2.200	NOM	AF	0.000	-0.248
224.100	2.000	780.000	1.000	5.000	6.000	2.100	NOM	RW	-4.000	-0.493
224.200	6.000	1247.000	1.000	12.000	1.000	2.200	NOM	RW	5.000	0.596
231.100	3.000	769.000	1.000	10.000	3.000	2.100	ISA	MI	0.000	-0.519
231.200	2.000	550.000	1.000	51.000	2.000	2.200	ISA	MI	0.000	-1.029
233.100	5.000	496.000	1.000	35.000	5.000	2.100	ISA	GA	0.000	-1.155
233.200	3.000	1436.000	1.000	33.000	3.000	2.200	ISA	GA	0.000	1.036
242.100	3.000	688.000	1.000	3.000	3.000	2.100	CON	AF	0.000	-0.708
242.200	1.000	791.000	1.000	42.000	1.000	2.200	CON	AF	0.000	-0.467
251.100	2.000	738.000	1.000	6.000	2.000	2.100	DOT	MI	0.000	-0.591
251.200	2.000	777.000	1.000	22.000	2.000	2.200	DOT	MI	0.000	-0.500
253.100	5.000	665.000	1.000	34.000	5.000	2.100	DOT	GA	0.000	-0.761
253.200	3.000	1599.000	1.000	13.000	3.000	2.200	DOT	GA	0.000	1.417
312.000	3.000	1320.000	1.000	16.000	3.000	3.000	CHO	AF	0.000	0.766
321.000	5.000	1088.000	1.000	49.000	4.000	3.000	NOM	MI	1.000	0.225
323.000	2.000	1288.000	1.000	36.000	6.000	3.000	NOM	GA	-4.000	0.691
332.000	3.000	1993.000	1.000	32.000	3.000	3.000	ISA	AF	0.000	2.335
341.000	4.000	1335.000	1.000	47.000	4.000	3.000	CON	MI	0.000	0.801
343.000	2.000	1047.000	1.000	60.000	2.000	3.000	CON	GA	0.000	0.129
352.000	4.000	1306.000	1.000	37.000	4.000	3.000	DOT	AF	0.000	0.733
354.000	6.000	1258.000	1.000	59.000	6.000	3.000	DOT	RW	0.000	0.621
411.000	2.000	524.000	1.000	30.000	2.000	4.000	CHO	MI	0.000	-1.090
413.000	3.000	822.000	2.000	55.000	1.000	4.000	CHO	GA	2.000	-0.395
422.000	3.000	712.000	1.000	24.000	4.000	4.000	NOM	AF	-1.000	-0.652
424.000	4.000	855.000	1.000	25.000	4.000	4.000	NOM	RW	0.000	-0.318
431.000	2.000	495.000	1.000	21.000	2.000	4.000	ISA	MI	0.000	-1.158
433.000	1.000	353.000	1.000	40.000	1.000	4.000	ISA	GA	0.000	-1.489
442.000	3.000	576.000	1.000	41.000	3.000	4.000	CON	AF	0.000	-0.969
451.000	2.000	453.000	1.000	48.000	2.000	4.000	DOT	MI	0.000	-1.256
453.000	1.000	410.000	1.000	20.000	1.000	4.000	DOT	GA	0.000	-1.356
512.000	2.000	1327.000	2.000	38.000	2.000	5.000	CHO	AF	0.000	0.782
521.000	1.000	1072.000	1.000	14.000	1.000	5.000	NOM	MI	0.000	0.188
523.000	2.000	502.000	1.000	19.000	1.000	5.000	NOM	GA	1.000	-1.141
532.000	2.000	948.000	1.000	23.000	2.000	5.000	ISA	AF	0.000	-0.101
541.000	1.000	989.000	1.000	26.000	1.000	5.000	CON	MI	0.000	-0.006
543.000	1.000	590.000	1.000	45.000	1.000	5.000	CON	GA	0.000	-0.936
552.000	2.000	680.000	1.000	57.000	2.000	5.000	DOT	AF	0.000	-0.726
554.000	2.000	1372.000	1.000	27.000	1.000	5.000	DOT	RW	1.000	0.887

Table C.1 (continued) - Subject 212

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	8.000	899.000	2.000	55.000	1.000	1.000	CHO	AF	7.000	0.053
121.000	6.000	687.000	1.000	14.000	6.000	1.000	NOM	MI	0.000	-0.425
123.000	3.000	914.000	2.000	8.000	5.000	1.000	NOM	GA	-2.000	0.087
132.000	7.000	1781.000	2.000	18.000	3.000	1.000	ISA	AF	4.000	2.045
141.000	8.000	744.000	4.000	15.000	6.000	1.000	CON	MI	2.000	-0.297
143.000	5.000	1334.000	2.000	21.000	2.000	1.000	CON	GA	3.000	1.036
152.000	3.000	989.000	3.000	43.000	1.000	1.000	DOT	AF	2.000	0.257
154.000	3.000	976.000	3.000	16.000	1.000	1.000	DOT	RW	2.000	0.227
211.100	2.000	1245.000	1.000	2.000	2.000	2.100	CHO	MI	0.000	0.835
211.200	2.000	657.000	1.000	38.000	2.000	2.200	CHO	MI	0.000	-0.493
213.100	2.000	836.000	1.000	17.000	5.000	2.100	CHO	GA	-3.000	-0.089
213.200	3.000	779.000	1.000	45.000	3.000	2.200	CHO	GA	0.000	-0.217
222.100	6.000	824.000	1.000	25.000	6.000	2.100	NOM	AF	0.000	-0.116
222.200	4.000	648.000	1.000	35.000	1.000	2.200	NOM	AF	3.000	-0.513
224.100	6.000	744.000	1.000	39.000	6.000	2.100	NOM	RW	0.000	-0.297
224.200	1.000	557.000	1.000	46.000	1.000	2.200	NOM	RW	0.000	-0.719
231.100	3.000	455.000	1.000	47.000	3.000	2.100	ISA	MI	0.000	-0.949
231.200	4.000	521.000	1.000	59.000	2.000	2.200	ISA	MI	2.000	-0.800
233.100	5.000	404.000	1.000	57.000	5.000	2.100	ISA	GA	0.000	-1.064
233.200	3.000	1154.000	1.000	20.000	3.000	2.200	ISA	GA	0.000	0.629
242.100	3.000	532.000	1.000	22.000	3.000	2.100	CON	AF	0.000	-0.775
242.200	4.000	414.000	1.000	53.000	1.000	2.200	CON	AF	3.000	-1.042
251.100	2.000	365.000	1.000	31.000	2.000	2.100	DOT	MI	0.000	-1.152
251.200	2.000	720.000	1.000	27.000	2.000	2.200	DOT	MI	0.000	-0.351
253.100	5.000	749.000	2.000	24.000	5.000	2.100	DOT	GA	0.000	-0.285
253.200	3.000	1725.000	1.000	5.000	3.000	2.200	DOT	GA	0.000	1.919
312.000	3.000	684.000	2.000	44.000	3.000	3.000	CHO	AF	0.000	-0.432
321.000	5.000	1872.000	2.000	41.000	4.000	3.000	NOM	MI	1.000	2.251
323.000	2.000	768.000	3.000	54.000	6.000	3.000	NOM	GA	-4.000	-0.242
332.000	5.000	1919.000	4.000	19.000	3.000	3.000	ISA	AF	2.000	2.357
341.000	4.000	2146.000	2.000	4.000	4.000	3.000	CON	MI	0.000	2.869
343.000	2.000	1446.000	2.000	11.000	2.000	3.000	CON	GA	0.000	1.289
352.000	4.000	946.000	1.000	49.000	4.000	3.000	DOT	AF	0.000	0.160
354.000	3.000	768.000	2.000	56.000	6.000	3.000	DOT	RW	-3.000	-0.242
411.000	2.000	1440.000	1.000	1.000	2.000	4.000	CHO	MI	0.000	1.275
413.000	1.000	1045.000	1.000	10.000	1.000	4.000	CHO	GA	0.000	0.383
422.000	4.000	594.000	1.000	28.000	4.000	4.000	NOM	AF	0.000	-0.635
424.000	4.000	880.000	1.000	7.000	4.000	4.000	NOM	RW	0.000	0.011
431.000	2.000	374.000	1.000	48.000	2.000	4.000	ISA	MI	0.000	-1.132
433.000	1.000	453.000	1.000	29.000	1.000	4.000	ISA	GA	0.000	-0.954
442.000	3.000	617.000	1.000	51.000	3.000	4.000	CON	AF	0.000	-0.583
451.000	2.000	349.000	1.000	37.000	2.000	4.000	DOT	MI	0.000	-1.188
453.000	1.000	446.000	1.000	26.000	1.000	4.000	DOT	GA	0.000	-0.969
512.000	1.000	1191.000	3.000	60.000	2.000	5.000	CHO	AF	-1.000	0.713
521.000	1.000	799.000	1.000	33.000	1.000	5.000	NOM	MI	0.000	-0.172
523.000	1.000	721.000	3.000	50.000	1.000	5.000	NOM	GA	0.000	-0.348
532.000	2.000	403.000	1.000	52.000	2.000	5.000	ISA	AF	0.000	-1.067
541.000	1.000	627.000	1.000	58.000	1.000	5.000	CON	MI	0.000	-0.561
543.000	1.000	569.000	1.000	6.000	1.000	5.000	CON	GA	0.000	-0.692
552.000	2.000	531.000	1.000	13.000	2.000	5.000	DOT	AF	0.000	-0.778
554.000	1.000	1400.000	1.000	36.000	1.000	5.000	DOT	RW	0.000	1.185

Table C.1 (continued) - Subject 213

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	3.000	1221.000	1.000	44.000	1.000	1.000	CHO	AF	2.000	0.993
114.000	2.000	663.000	2.000	55.000	3.000	1.000	CHO	RW	-1.000	-0.582
121.000	6.000	908.000	2.000	46.000	6.000	1.000	NOM	MI	0.000	0.109
123.000	5.000	1190.000	1.000	48.000	5.000	1.000	NOM	GA	0.000	0.906
132.000	5.000	1662.000	2.000	36.000	3.000	1.000	ISA	AF	2.000	2.239
134.000	4.000	1108.000	2.000	17.000	4.000	1.000	ISA	RW	0.000	0.674
141.000	5.000	1124.000	2.000	39.000	6.000	1.000	CON	MI	-1.000	0.720
143.000	5.000	805.000	1.000	37.000	2.000	1.000	CON	GA	3.000	-0.181
152.000	3.000	979.000	2.000	50.000	1.000	1.000	DOT	AF	2.000	0.310
154.000	4.000	1153.000	2.000	33.000	1.000	1.000	DOT	RW	3.000	0.801
211.100	2.000	561.000	1.000	57.000	2.000	2.100	CHO	MI	0.000	-0.871
211.200	2.000	416.000	1.000	28.000	2.000	2.200	CHO	MI	0.000	-1.280
213.100	2.000	1468.000	1.000	21.000	5.000	2.100	CHO	GA	-3.000	1.691
213.200	6.000	730.000	1.000	22.000	3.000	2.200	CHO	GA	3.000	-0.393
222.100	1.000	929.000	1.000	38.000	6.000	2.100	NOM	AF	-5.000	0.169
222.200	1.000	2049.000	1.000	1.000	1.000	2.200	NOM	AF	0.000	3.332
224.100	5.000	1243.000	1.000	4.000	6.000	2.100	NOM	RW	-1.000	1.056
224.200	1.000	697.000	1.000	59.000	1.000	2.200	NOM	RW	0.000	-0.486
231.100	3.000	532.000	1.000	31.000	3.000	2.100	ISA	MI	0.000	-0.952
231.200	4.000	773.000	1.000	56.000	2.000	2.200	ISA	MI	2.000	-0.272
233.100	2.000	662.000	1.000	40.000	5.000	2.100	ISA	GA	-3.000	-0.585
233.200	8.000	1616.000	2.000	45.000	3.000	2.200	ISA	GA	5.000	2.109
242.100	3.000	400.000	1.000	58.000	3.000	2.100	CON	AF	0.000	-1.325
242.200	1.000	1222.000	1.000	3.000	1.000	2.200	CON	AF	0.000	0.996
244.100	5.000	760.000	1.000	9.000	5.000	2.100	CON	RW	0.000	-0.308
244.200	6.000	979.000	2.000	13.000	1.000	2.200	CON	RW	5.000	0.310
251.100	2.000	520.000	2.000	16.000	2.000	2.100	DOT	MI	0.000	-0.986
251.200	6.000	757.000	1.000	11.000	2.000	2.200	DOT	MI	4.000	-0.317
253.100	2.000	747.000	1.000	5.000	5.000	2.100	DOT	GA	-3.000	-0.345
253.200	3.000	1375.000	2.000	18.000	3.000	2.200	DOT	GA	0.000	1.428
312.000	5.000	961.000	1.000	41.000	3.000	3.000	CHO	AF	2.000	0.259
314.000	1.000	993.000	1.000	20.000	4.000	3.000	CHO	RW	-3.000	0.350
321.000	4.000	478.000	1.000	51.000	4.000	3.000	NOM	MI	0.000	-1.105
323.000	6.000	427.000	1.000	60.000	6.000	3.000	NOM	GA	0.000	-1.249
332.000	5.000	1027.000	2.000	32.000	3.000	3.000	ISA	AF	2.000	0.446
334.000	4.000	593.000	1.000	23.000	5.000	3.000	ISA	RW	-1.000	-0.780
341.000	1.000	927.000	1.000	15.000	4.000	3.000	CON	MI	-3.000	0.163
343.000	5.000	641.000	1.000	26.000	2.000	3.000	CON	GA	3.000	-0.645
352.000	4.000	974.000	1.000	27.000	4.000	3.000	DOT	AF	0.000	0.296
354.000	3.000	888.000	2.000	30.000	6.000	3.000	DOT	RW	-3.000	0.053
411.000	2.000	669.000	1.000	19.000	2.000	4.000	CHO	MI	0.000	-0.565
413.000	1.000	457.000	1.000	24.000	1.000	4.000	CHO	GA	0.000	-1.164
422.000	4.000	382.000	1.000	52.000	4.000	4.000	NOM	AF	0.000	-1.376
424.000	4.000	408.000	1.000	29.000	4.000	4.000	NOM	RW	0.000	-1.303
431.000	2.000	426.000	1.000	53.000	2.000	4.000	ISA	MI	0.000	-1.252
433.000	1.000	1444.000	2.000	54.000	1.000	4.000	ISA	GA	0.000	1.623
442.000	3.000	714.000	2.000	34.000	3.000	4.000	CON	AF	0.000	-0.438
444.000	1.000	643.000	1.000	43.000	1.000	4.000	CON	RW	0.000	-0.639
451.000	2.000	552.000	1.000	10.000	2.000	4.000	DOT	MI	0.000	-0.896
453.000	1.000	580.000	1.000	12.000	1.000	4.000	DOT	GA	0.000	-0.817
512.000	3.000	1228.000	1.000	35.000	2.000	5.000	CHO	AF	1.000	1.013
514.000	1.000	973.000	2.000	8.000	1.000	5.000	CHO	RW	0.000	0.293
521.000	1.000	1029.000	2.000	6.000	1.000	5.000	NOM	MI	0.000	0.451
523.000	3.000	601.000	2.000	42.000	1.000	5.000	NOM	GA	2.000	-0.758
532.000	2.000	576.000	1.000	7.000	2.000	5.000	ISA	AF	0.000	-0.828
534.000	2.000	730.000	1.000	49.000	1.000	5.000	ISA	RW	1.000	-0.393
541.000	3.000	806.000	2.000	47.000	1.000	5.000	CON	MI	2.000	-0.179
543.000	1.000	886.000	1.000	2.000	1.000	5.000	CON	GA	0.000	0.047
552.000	3.000	1257.000	2.000	14.000	2.000	5.000	DOT	AF	1.000	1.095
554.000	2.000	635.000	2.000	25.000	1.000	5.000	DOT	RW	1.000	-0.662

Table C.1 (continued) - Subject 214

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	3.000	1188.000	1.000	44.000	1.000	1.000	CHO	AF	2.000	-0.361
114.000	3.000	1256.000	2.000	58.000	3.000	1.000	CHO	RW	0.000	-0.288
121.000	5.000	790.000	1.000	15.000	6.000	1.000	NOM	MI	-1.000	-0.790
123.000	5.000	1122.000	1.000	55.000	5.000	1.000	NOM	GA	0.000	-0.432
132.000	4.000	2675.000	2.000	2.000	3.000	1.000	ISA	AF	1.000	1.241
134.000	3.000	1056.000	1.000	42.000	4.000	1.000	ISA	RW	-1.000	-0.503
141.000	4.000	1697.000	2.000	23.000	6.000	1.000	CON	MI	-2.000	0.187
143.000	6.000	1353.000	2.000	53.000	2.000	1.000	CON	GA	4.000	-0.183
152.000	8.000	1155.000	1.000	30.000	1.000	1.000	DOT	AF	7.000	-0.397
154.000	8.000	1382.000	1.000	6.000	1.000	1.000	DOT	RW	7.000	-0.152
211.100	2.000	651.000	1.000	46.000	2.000	2.100	CHO	MI	0.000	-0.940
211.200	2.000	586.000	1.000	49.000	2.000	2.200	CHO	MI	0.000	-1.010
213.100	2.000	2856.000	1.000	9.000	5.000	2.100	CHO	GA	-3.000	1.437
213.200	3.000	1534.000	1.000	40.000	3.000	2.200	CHO	GA	0.000	0.012
222.100	1.000	821.000	1.000	57.000	6.000	2.100	NOM	AF	-5.000	-0.757
222.200	4.000	1425.000	1.000	38.000	1.000	2.200	NOM	AF	3.000	-0.106
224.100	5.000	1334.000	1.000	5.000	6.000	2.100	NOM	RW	-1.000	-0.204
224.200	6.000	1947.000	2.000	21.000	1.000	2.200	NOM	RW	5.000	0.457
231.100	3.000	519.000	1.000	50.000	3.000	2.100	ISA	MI	0.000	-1.082
231.200	2.000	442.000	1.000	51.000	2.000	2.200	ISA	MI	0.000	-1.165
233.100	5.000	2514.000	1.000	18.000	5.000	2.100	ISA	GA	0.000	1.068
233.200	3.000	795.000	1.000	54.000	3.000	2.200	ISA	GA	0.000	-0.785
242.100	3.000	853.000	1.000	27.000	3.000	2.100	CON	AF	0.000	-0.722
242.200	1.000	1928.000	1.000	4.000	1.000	2.200	CON	AF	0.000	0.436
244.100	5.000	767.000	1.000	19.000	5.000	2.100	CON	RW	0.000	-0.815
244.200	6.000	3250.000	2.000	26.000	1.000	2.200	CON	RW	5.000	1.861
251.100	2.000	1158.000	1.000	1.000	2.000	2.100	DOT	MI	0.000	-0.393
251.200	2.000	1091.000	1.000	7.000	2.000	2.200	DOT	MI	0.000	-0.466
253.100	5.000	1566.000	1.000	34.000	5.000	2.100	DOT	GA	0.000	0.046
253.200	3.000	2606.000	1.000	29.000	3.000	2.200	DOT	GA	0.000	1.167
312.000	3.000	1505.000	1.000	14.000	3.000	3.000	CHO	AF	0.000	-0.019
314.000	1.000	2685.000	1.000	22.000	4.000	3.000	CHO	RW	-3.000	1.252
321.000	4.000	2144.000	1.000	28.000	4.000	3.000	NOM	MI	0.000	0.669
323.000	2.000	1045.000	1.000	56.000	6.000	3.000	NOM	GA	-4.000	-0.515
332.000	5.000	3395.000	2.000	45.000	3.000	3.000	ISA	AF	2.000	2.017
334.000	5.000	2095.000	1.000	48.000	5.000	3.000	ISA	RW	0.000	0.616
341.000	3.000	1873.000	1.000	36.000	4.000	3.000	CON	MI	-1.000	0.377
343.000	2.000	2877.000	2.000	16.000	2.000	3.000	CON	GA	0.000	1.459
352.000	4.000	667.000	1.000	59.000	4.000	3.000	DOT	AF	0.000	-0.923
354.000	1.000	2627.000	3.000	43.000	6.000	3.000	DOT	RW	-5.000	1.190
411.000	2.000	772.000	1.000	17.000	2.000	4.000	CHO	MI	0.000	-0.809
413.000	1.000	686.000	1.000	60.000	1.000	4.000	CHO	GA	0.000	-0.902
422.000	3.000	1928.000	2.000	3.000	4.000	4.000	NOM	AF	-1.000	0.436
424.000	2.000	1712.000	1.000	39.000	4.000	4.000	NOM	RW	-2.000	0.204
431.000	2.000	842.000	1.000	37.000	2.000	4.000	ISA	MI	0.000	-0.734
433.000	1.000	582.000	1.000	31.000	1.000	4.000	ISA	GA	0.000	-1.014
442.000	3.000	1324.000	1.000	12.000	3.000	4.000	CON	AF	0.000	-0.215
444.000	1.000	457.000	1.000	41.000	1.000	4.000	CON	RW	0.000	-1.149
451.000	2.000	497.000	1.000	35.000	2.000	4.000	DOT	MI	0.000	-1.106
453.000	1.000	664.000	1.000	8.000	1.000	4.000	DOT	GA	0.000	-0.926
512.000	2.000	4782.000	3.000	13.000	2.000	5.000	CHO	AF	0.000	3.512
514.000	1.000	3343.000	2.000	25.000	1.000	5.000	CHO	RW	0.000	1.961
521.000	1.000	862.000	1.000	32.000	1.000	5.000	NOM	MI	0.000	-0.712
523.000	1.000	3252.000	2.000	24.000	1.000	5.000	NOM	GA	0.000	1.863
532.000	2.000	1052.000	1.000	47.000	2.000	5.000	ISA	AF	0.000	-0.508
534.000	2.000	1633.000	1.000	33.000	1.000	5.000	ISA	RW	1.000	0.118
541.000	1.000	646.000	1.000	20.000	1.000	5.000	CON	MI	0.000	-0.945
543.000	1.000	761.000	1.000	10.000	1.000	5.000	CON	GA	0.000	-0.821
552.000	2.000	1108.000	1.000	11.000	2.000	5.000	DOT	AF	0.000	-0.447
554.000	2.000	1252.000	1.000	52.000	1.000	5.000	DOT	RW	1.000	-0.292

Table C.1 (continued) - Subject 215

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	8.000	1531.000	2.000	45.000	1.000	1.000	CHO	AF	7.000	2.194
114.000	6.000	578.000	2.000	59.000	3.000	1.000	CHO	RW	3.000	-0.759
121.000	5.000	811.000	2.000	36.000	6.000	1.000	NOM	MI	-1.000	-0.037
123.000	6.000	787.000	2.000	12.000	5.000	1.000	NOM	GA	1.000	-0.111
132.000	5.000	1176.000	2.000	46.000	3.000	1.000	ISA	AF	2.000	1.094
134.000	4.000	793.000	2.000	48.000	4.000	1.000	ISA	RW	0.000	-0.093
141.000	6.000	585.000	2.000	55.000	6.000	1.000	CON	MI	0.000	-0.737
143.000	1.000	1167.000	2.000	35.000	2.000	1.000	CON	GA	-1.000	1.066
152.000	6.000	1477.000	2.000	1.000	1.000	1.000	DOT	AF	5.000	2.027
154.000	6.000	875.000	3.000	42.000	1.000	1.000	DOT	RW	5.000	0.161
211.100	2.000	891.000	1.000	5.000	2.000	2.100	CHO	MI	0.000	0.211
211.200	6.000	1013.000	2.000	7.000	2.000	2.200	CHO	MI	4.000	0.589
213.100	5.000	713.000	2.000	34.000	5.000	2.100	CHO	GA	0.000	-0.341
213.200	2.000	929.000	2.000	44.000	3.000	2.200	CHO	GA	-1.000	0.329
222.100	1.000	773.000	1.000	28.000	6.000	2.100	NOM	AF	-5.000	-0.155
222.200	1.000	631.000	1.000	25.000	1.000	2.200	NOM	AF	0.000	-0.595
224.100	5.000	721.000	1.000	15.000	6.000	2.100	NOM	RW	-1.000	-0.316
224.200	6.000	462.000	2.000	57.000	1.000	2.200	NOM	RW	5.000	-1.118
231.100	3.000	1044.000	1.000	14.000	3.000	2.100	ISA	MI	0.000	0.685
231.200	2.000	926.000	2.000	38.000	2.000	2.200	ISA	MI	0.000	0.319
233.100	5.000	572.000	2.000	22.000	5.000	2.100	ISA	GA	0.000	-0.778
233.200	2.000	1365.000	3.000	41.000	3.000	2.200	ISA	GA	-1.000	1.680
242.100	3.000	629.000	1.000	2.000	3.000	2.100	CON	AF	0.000	-0.601
242.200	1.000	901.000	2.000	10.000	1.000	2.200	CON	AF	0.000	0.242
244.100	5.000	872.000	2.000	11.000	5.000	2.100	CON	RW	0.000	0.152
244.200	6.000	912.000	2.000	54.000	1.000	2.200	CON	RW	5.000	0.276
251.100	2.000	535.000	1.000	9.000	2.000	2.100	DOT	MI	0.000	-0.892
251.200	5.000	575.000	2.000	30.000	2.000	2.200	DOT	MI	3.000	-0.768
253.100	5.000	541.000	1.000	21.000	5.000	2.100	DOT	GA	0.000	-0.874
253.200	5.000	487.000	2.000	58.000	3.000	2.200	DOT	GA	2.000	-1.041
312.000	5.000	403.000	2.000	37.000	3.000	3.000	CHO	AF	2.000	-1.301
314.000	6.000	775.000	2.000	17.000	4.000	3.000	CHO	RW	2.000	-0.149
321.000	1.000	675.000	2.000	53.000	4.000	3.000	NOM	MI	-3.000	-0.458
323.000	1.000	540.000	2.000	60.000	6.000	3.000	NOM	GA	-5.000	-0.877
332.000	5.000	989.000	2.000	27.000	3.000	3.000	ISA	AF	2.000	0.515
334.000	2.000	556.000	2.000	49.000	5.000	3.000	ISA	RW	-3.000	-0.827
341.000	4.000	949.000	2.000	39.000	4.000	3.000	CON	MI	0.000	0.391
343.000	1.000	1909.000	3.000	6.000	2.000	3.000	CON	GA	-1.000	3.366
352.000	2.000	855.000	2.000	20.000	4.000	3.000	DOT	AF	-2.000	0.099
354.000	5.000	1034.000	2.000	26.000	6.000	3.000	DOT	RW	-1.000	0.654
411.000	2.000	600.000	2.000	16.000	2.000	4.000	CHO	MI	0.000	-0.691
413.000	3.000	1599.000	2.000	13.000	1.000	4.000	CHO	GA	2.000	2.405
422.000	3.000	523.000	2.000	51.000	4.000	4.000	NOM	AF	-1.000	-0.929
424.000	3.000	716.000	2.000	47.000	4.000	4.000	NOM	RW	-1.000	-0.331
431.000	2.000	435.000	1.000	33.000	2.000	4.000	ISA	MI	0.000	-1.202
433.000	3.000	1208.000	2.000	8.000	1.000	4.000	ISA	GA	2.000	1.193
442.000	3.000	487.000	2.000	56.000	3.000	4.000	CON	AF	0.000	-1.041
444.000	1.000	658.000	2.000	29.000	1.000	4.000	CON	RW	0.000	-0.511
451.000	2.000	698.000	1.000	3.000	2.000	4.000	DOT	MI	0.000	-0.387
453.000	1.000	385.000	1.000	50.000	1.000	4.000	DOT	GA	0.000	-1.357
512.000	1.000	941.000	2.000	23.000	2.000	5.000	CHO	AF	-1.000	0.366
514.000	1.000	1280.000	2.000	43.000	1.000	5.000	CHO	RW	0.000	1.416
521.000	1.000	641.000	2.000	52.000	1.000	5.000	NOM	MI	0.000	-0.564
523.000	1.000	664.000	1.000	31.000	1.000	5.000	NOM	GA	0.000	-0.493
532.000	2.000	463.000	1.000	32.000	2.000	5.000	ISA	AF	0.000	-1.115
534.000	2.000	827.000	2.000	24.000	1.000	5.000	ISA	RW	1.000	0.013
541.000	1.000	619.000	1.000	40.000	1.000	5.000	CON	MI	0.000	-0.632
543.000	1.000	655.000	1.000	4.000	1.000	5.000	CON	GA	0.000	-0.520
552.000	2.000	672.000	2.000	19.000	2.000	5.000	DOT	AF	0.000	-0.468
554.000	1.000	1348.000	2.000	18.000	1.000	5.000	DOT	RW	0.000	1.627

Table C.1 (continued) - Subject 216

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	8.000	2244.000	3.000	8.000	1.000	1.000	CHO	AF	7.000	2.683
114.000	1.000	1601.000	2.000	22.000	3.000	1.000	CHO	RW	-2.000	1.313
121.000	4.000	431.000	2.000	40.000	6.000	1.000	NOM	MI	-2.000	-1.180
123.000	3.000	1121.000	1.000	18.000	5.000	1.000	NOM	GA	-2.000	0.290
132.000	5.000	931.000	3.000	45.000	3.000	1.000	ISA	AF	2.000	-0.114
134.000	4.000	1788.000	3.000	30.000	4.000	1.000	ISA	RW	0.000	1.712
141.000	7.000	964.000	3.000	35.000	6.000	1.000	CON	MI	1.000	-0.044
143.000	6.000	697.000	4.000	39.000	2.000	1.000	CON	GA	4.000	-0.613
152.000	8.000	1202.000	4.000	47.000	1.000	1.000	DOT	AF	7.000	0.463
154.000	5.000	1013.000	4.000	15.000	1.000	1.000	DOT	RW	4.000	0.060
211.100	2.000	816.000	1.000	4.000	2.000	2.100	CHO	MI	0.000	-0.359
211.200	2.000	1121.000	1.000	56.000	2.000	2.200	CHO	MI	0.000	0.290
213.100	5.000	1328.000	2.000	1.000	5.000	2.100	CHO	GA	0.000	0.731
213.200	8.000	1950.000	1.000	29.000	3.000	2.200	CHO	GA	5.000	2.057
222.100	1.000	1499.000	4.000	32.000	6.000	2.100	NOM	AF	-5.000	1.096
222.200	1.000	1255.000	2.000	6.000	1.000	2.200	NOM	AF	0.000	0.576
224.100	5.000	546.000	1.000	46.000	6.000	2.100	NOM	RW	-1.000	-0.935
224.200	6.000	1230.000	2.000	41.000	1.000	2.200	NOM	RW	5.000	0.523
231.100	3.000	935.000	2.000	16.000	3.000	2.100	ISA	MI	0.000	-0.106
231.200	2.000	974.000	3.000	25.000	2.000	2.200	ISA	MI	0.000	-0.023
233.100	5.000	960.000	3.000	43.000	5.000	2.100	ISA	GA	0.000	-0.053
233.200	6.000	1394.000	2.000	44.000	3.000	2.200	ISA	GA	3.000	0.872
242.100	3.000	414.000	3.000	53.000	3.000	2.100	CON	AF	0.000	-1.216
242.200	4.000	1376.000	1.000	10.000	1.000	2.200	CON	AF	3.000	0.834
244.100	6.000	890.000	1.000	13.000	5.000	2.100	CON	RW	1.000	-0.202
244.200	8.000	910.000	3.000	20.000	1.000	2.200	CON	RW	7.000	-0.159
251.100	2.000	550.000	1.000	50.000	2.000	2.100	DOT	MI	0.000	-0.926
251.200	6.000	2054.000	4.000	48.000	2.000	2.200	DOT	MI	4.000	2.278
253.100	5.000	234.000	2.000	58.000	5.000	2.100	DOT	GA	0.000	-1.599
253.200	3.000	1533.000	2.000	12.000	3.000	2.200	DOT	GA	0.000	1.168
312.000	3.000	742.000	2.000	57.000	3.000	3.000	CHO	AF	0.000	-0.517
314.000	1.000	953.000	2.000	28.000	4.000	3.000	CHO	RW	-3.000	-0.068
321.000	2.000	261.000	1.000	60.000	4.000	3.000	NOM	MI	-2.000	-1.542
323.000	2.000	888.000	1.000	23.000	6.000	3.000	NOM	GA	-4.000	-0.206
332.000	5.000	1830.000	4.000	24.000	3.000	3.000	ISA	AF	2.000	1.801
334.000	5.000	672.000	3.000	49.000	5.000	3.000	ISA	RW	0.000	-0.666
341.000	4.000	1332.000	2.000	51.000	4.000	3.000	CON	MI	0.000	0.740
343.000	5.000	1077.000	3.000	9.000	2.000	3.000	CON	GA	3.000	0.197
352.000	4.000	826.000	3.000	19.000	4.000	3.000	DOT	AF	0.000	-0.338
354.000	3.000	1775.000	2.000	14.000	6.000	3.000	DOT	RW	-3.000	1.684
411.000	2.000	710.000	1.000	2.000	2.000	4.000	CHO	MI	0.000	-0.585
413.000	1.000	1051.000	2.000	21.000	1.000	4.000	CHO	GA	0.000	0.141
422.000	4.000	983.000	2.000	3.000	4.000	4.000	NOM	AF	0.000	-0.004
424.000	4.000	683.000	2.000	17.000	4.000	4.000	NOM	RW	0.000	-0.643
431.000	2.000	222.000	2.000	59.000	2.000	4.000	ISA	MI	0.000	-1.625
433.000	1.000	487.000	3.000	34.000	1.000	4.000	ISA	GA	0.000	-1.060
442.000	4.000	369.000	2.000	54.000	3.000	4.000	CON	AF	1.000	-1.312
444.000	1.000	885.000	1.000	11.000	1.000	4.000	CON	RW	0.000	-0.212
451.000	2.000	367.000	2.000	38.000	2.000	4.000	DOT	MI	0.000	-1.316
453.000	1.000	419.000	1.000	52.000	1.000	4.000	DOT	GA	0.000	-1.205
512.000	2.000	1001.000	2.000	37.000	2.000	5.000	CHO	AF	0.000	0.035
514.000	1.000	716.000	3.000	7.000	1.000	5.000	CHO	RW	0.000	-0.572
521.000	1.000	1109.000	2.000	31.000	1.000	5.000	NOM	MI	0.000	0.265
523.000	2.000	768.000	3.000	27.000	1.000	5.000	NOM	GA	1.000	-0.462
532.000	2.000	1154.000	2.000	26.000	2.000	5.000	ISA	AF	0.000	0.361
534.000	1.000	455.000	2.000	55.000	1.000	5.000	ISA	RW	0.000	-1.129
541.000	1.000	448.000	2.000	33.000	1.000	5.000	CON	MI	0.000	-1.143
543.000	1.000	695.000	2.000	42.000	1.000	5.000	CON	GA	0.000	-0.617
552.000	2.000	767.000	2.000	36.000	2.000	5.000	DOT	AF	0.000	-0.464
554.000	2.000	1475.000	2.000	5.000	1.000	5.000	DOT	RW	1.000	1.045

Table C.1 (continued) - Subject 217

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	1.000	1097.000	1.000	52.000	1.000	1.000	CHO	AF	0.000	0.319
114.000	4.000	2108.000	2.000	6.000	3.000	1.000	CHO	RW	1.000	2.569
121.000	5.000	785.000	2.000	41.000	6.000	1.000	NOM	MI	-1.000	-0.375
123.000	4.000	713.000	2.000	36.000	5.000	1.000	NOM	GA	-1.000	-0.536
132.000	4.000	1069.000	1.000	37.000	3.000	1.000	ISA	AF	1.000	0.257
134.000	2.000	933.000	2.000	32.000	4.000	1.000	ISA	RW	-2.000	-0.046
141.000	2.000	909.000	1.000	13.000	6.000	1.000	CON	MI	-4.000	-0.099
143.000	1.000	1134.000	1.000	39.000	2.000	1.000	CON	GA	-1.000	0.401
152.000	3.000	1175.000	2.000	46.000	1.000	1.000	DOT	AF	2.000	0.493
154.000	8.000	1997.000	1.000	9.000	1.000	1.000	DOT	RW	7.000	2.322
211.100	2.000	491.000	1.000	25.000	2.000	2.100	CHO	MI	0.000	-1.030
211.200	2.000	556.000	1.000	29.000	2.000	2.200	CHO	MI	0.000	-0.885
213.100	2.000	1127.000	1.000	24.000	5.000	2.100	CHO	GA	-3.000	0.386
213.200	1.000	842.000	1.000	50.000	3.000	2.200	CHO	GA	-2.000	-0.249
222.100	4.000	1267.000	1.000	22.000	6.000	2.100	NOM	AF	-2.000	0.697
222.200	4.000	1075.000	1.000	38.000	1.000	2.200	NOM	AF	3.000	0.270
224.100	5.000	1325.000	1.000	7.000	6.000	2.100	NOM	RW	-1.000	0.826
224.200	1.000	980.000	1.000	2.000	1.000	2.200	NOM	RW	0.000	0.059
231.100	3.000	657.000	1.000	1.000	3.000	2.100	ISA	MI	0.000	-0.660
231.200	2.000	683.000	1.000	54.000	2.000	2.200	ISA	MI	0.000	-0.603
233.100	5.000	557.000	1.000	60.000	5.000	2.100	ISA	GA	0.000	-0.883
233.200	6.000	1188.000	2.000	40.000	3.000	2.200	ISA	GA	3.000	0.522
242.100	3.000	495.000	1.000	31.000	3.000	2.100	CON	AF	0.000	-1.021
242.200	4.000	649.000	1.000	44.000	1.000	2.200	CON	AF	3.000	-0.678
244.100	5.000	1128.000	1.000	16.000	5.000	2.100	CON	RW	0.000	0.388
244.200	1.000	1915.000	1.000	5.000	1.000	2.200	CON	RW	0.000	2.140
251.100	2.000	959.000	1.000	17.000	2.000	2.100	DOT	MI	0.000	0.012
251.200	2.000	817.000	1.000	23.000	2.000	2.200	DOT	MI	0.000	-0.304
253.100	5.000	750.000	2.000	34.000	5.000	2.100	DOT	GA	0.000	-0.453
253.200	5.000	1539.000	1.000	18.000	3.000	2.200	DOT	GA	2.000	1.303
312.000	3.000	1460.000	1.000	14.000	3.000	3.000	CHO	AF	0.000	1.127
314.000	4.000	1506.000	2.000	21.000	4.000	3.000	CHO	RW	0.000	1.229
321.000	4.000	631.000	1.000	11.000	4.000	3.000	NOM	MI	0.000	-0.718
323.000	6.000	1549.000	2.000	20.000	6.000	3.000	NOM	GA	0.000	1.325
332.000	3.000	1568.000	2.000	45.000	3.000	3.000	ISA	AF	0.000	1.367
334.000	4.000	735.000	1.000	51.000	5.000	3.000	ISA	RW	-1.000	-0.487
341.000	6.000	1871.000	1.000	8.000	4.000	3.000	CON	MI	2.000	2.042
343.000	2.000	1262.000	1.000	12.000	2.000	3.000	CON	GA	0.000	0.686
352.000	2.000	2109.000	2.000	3.000	4.000	3.000	DOT	AF	-2.000	2.572
354.000	3.000	1102.000	1.000	15.000	6.000	3.000	DOT	RW	-3.000	0.330
411.000	2.000	467.000	1.000	49.000	2.000	4.000	CHO	MI	0.000	-1.083
413.000	3.000	588.000	1.000	58.000	1.000	4.000	CHO	GA	2.000	-0.814
422.000	4.000	856.000	1.000	35.000	4.000	4.000	NOM	AF	0.000	-0.217
424.000	4.000	715.000	1.000	47.000	4.000	4.000	NOM	RW	0.000	-0.531
431.000	2.000	827.000	1.000	27.000	2.000	4.000	ISA	MI	0.000	-0.282
433.000	1.000	764.000	1.000	28.000	1.000	4.000	ISA	GA	0.000	-0.422
442.000	3.000	510.000	1.000	53.000	3.000	4.000	CON	AF	0.000	-0.988
444.000	1.000	430.000	1.000	33.000	1.000	4.000	CON	RW	0.000	-1.166
451.000	2.000	308.000	1.000	55.000	2.000	4.000	DOT	MI	0.000	-1.437
453.000	1.000	574.000	1.000	19.000	1.000	4.000	DOT	GA	0.000	-0.845
512.000	3.000	609.000	2.000	26.000	2.000	5.000	CHO	AF	1.000	-0.767
514.000	1.000	1069.000	2.000	57.000	1.000	5.000	CHO	RW	0.000	0.257
521.000	3.000	467.000	1.000	59.000	1.000	5.000	NOM	MI	2.000	-1.083
523.000	2.000	539.000	1.000	10.000	1.000	5.000	NOM	GA	1.000	-0.923
532.000	2.000	522.000	1.000	43.000	2.000	5.000	ISA	AF	0.000	-0.961
534.000	2.000	686.000	1.000	4.000	1.000	5.000	ISA	RW	1.000	-0.596
541.000	1.000	696.000	1.000	30.000	1.000	5.000	CON	MI	0.000	-0.574
543.000	1.000	392.000	1.000	56.000	1.000	5.000	CON	GA	0.000	-1.250
552.000	2.000	912.000	1.000	48.000	2.000	5.000	DOT	AF	0.000	-0.093
554.000	2.000	578.000	1.000	42.000	1.000	5.000	DOT	RW	1.000	-0.836

Table C.1 (continued) - Subject 218

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	7.000	863.000	2.000	52.000	1.000	1.000	CHO	AF	6.000	-0.404
114.000	3.000	2097.000	3.000	6.000	3.000	1.000	CHO	RW	0.000	2.602
121.000	5.000	493.000	2.000	41.000	6.000	1.000	NOM	MI	-1.000	-1.305
123.000	4.000	700.000	1.000	36.000	5.000	1.000	NOM	GA	-1.000	-0.800
132.000	5.000	1127.000	2.000	37.000	3.000	1.000	ISA	AF	2.000	0.239
134.000	5.000	745.000	2.000	32.000	4.000	1.000	ISA	RW	1.000	-0.691
141.000	6.000	921.000	2.000	13.000	6.000	1.000	CON	MI	0.000	-0.262
143.000	8.000	849.000	4.000	39.000	2.000	1.000	CON	GA	6.000	-0.438
152.000	8.000	584.000	3.000	46.000	1.000	1.000	DOT	AF	7.000	-1.083
154.000	5.000	1074.000	3.000	9.000	1.000	1.000	DOT	RW	4.000	0.110
211.100	2.000	803.000	1.000	25.000	2.000	2.100	CHO	MI	0.000	-0.550
211.200	6.000	1282.000	1.000	29.000	2.000	2.200	CHO	MI	4.000	0.617
213.100	6.000	899.000	1.000	24.000	5.000	2.100	CHO	GA	1.000	-0.316
213.200	3.000	1752.000	2.000	50.000	3.000	2.200	CHO	GA	0.000	1.761
222.100	6.000	742.000	1.000	22.000	6.000	2.100	NOM	AF	0.000	-0.698
222.200	8.000	1065.000	2.000	38.000	1.000	2.200	NOM	AF	7.000	0.088
224.100	6.000	1471.000	1.000	7.000	6.000	2.100	NOM	RW	0.000	1.077
224.200	6.000	1557.000	2.000	2.000	1.000	2.200	NOM	RW	5.000	1.287
231.100	3.000	832.000	1.000	1.000	3.000	2.100	ISA	MI	0.000	-0.479
231.200	6.000	751.000	3.000	54.000	2.000	2.200	ISA	MI	4.000	-0.676
233.100	5.000	1182.000	2.000	60.000	5.000	2.100	ISA	GA	0.000	0.373
233.200	4.000	1449.000	4.000	40.000	3.000	2.200	ISA	GA	1.000	1.024
242.100	3.000	750.000	2.000	31.000	3.000	2.100	CON	AF	0.000	-0.679
242.200	1.000	901.000	2.000	44.000	1.000	2.200	CON	AF	0.000	-0.311
244.100	5.000	477.000	1.000	16.000	5.000	2.100	CON	RW	0.000	-1.343
244.200	1.000	1524.000	2.000	5.000	1.000	2.200	CON	RW	0.000	1.206
251.100	2.000	752.000	2.000	17.000	2.000	2.100	DOT	MI	0.000	-0.674
251.200	1.000	923.000	2.000	23.000	2.000	2.200	DOT	MI	-1.000	-0.257
253.100	6.000	623.000	1.000	34.000	5.000	2.100	DOT	GA	1.000	-0.988
253.200	3.000	1065.000	2.000	18.000	3.000	2.200	DOT	GA	0.000	0.088
312.000	5.000	1293.000	2.000	14.000	3.000	3.000	CHO	AF	2.000	0.644
314.000	1.000	653.000	1.000	21.000	4.000	3.000	CHO	RW	-3.000	-0.915
321.000	2.000	1311.000	1.000	11.000	4.000	3.000	NOM	MI	-2.000	0.687
323.000	2.000	1517.000	1.000	20.000	6.000	3.000	NOM	GA	-4.000	1.189
332.000	5.000	2332.000	4.000	45.000	3.000	3.000	ISA	AF	2.000	3.174
334.000	5.000	1556.000	2.000	51.000	5.000	3.000	ISA	RW	0.000	1.284
341.000	1.000	1239.000	2.000	8.000	4.000	3.000	CON	MI	-3.000	0.512
343.000	2.000	649.000	2.000	12.000	2.000	3.000	CON	GA	0.000	-0.925
352.000	4.000	1395.000	1.000	3.000	4.000	3.000	DOT	AF	0.000	0.892
354.000	6.000	1078.000	2.000	15.000	6.000	3.000	DOT	RW	0.000	0.120
411.000	2.000	492.000	1.000	49.000	2.000	4.000	CHO	MI	0.000	-1.307
413.000	1.000	518.000	1.000	58.000	1.000	4.000	CHO	GA	0.000	-1.244
422.000	4.000	1168.000	1.000	35.000	4.000	4.000	NOM	AF	0.000	0.339
424.000	4.000	461.000	1.000	47.000	4.000	4.000	NOM	RW	0.000	-1.382
431.000	2.000	890.000	2.000	27.000	2.000	4.000	ISA	MI	0.000	-0.338
433.000	1.000	1507.000	1.000	28.000	1.000	4.000	ISA	GA	0.000	1.165
442.000	3.000	739.000	1.000	53.000	3.000	4.000	CON	AF	0.000	-0.705
444.000	1.000	674.000	1.000	33.000	1.000	4.000	CON	RW	0.000	-0.864
451.000	2.000	471.000	1.000	55.000	2.000	4.000	DOT	MI	0.000	-1.358
453.000	1.000	915.000	1.000	19.000	1.000	4.000	DOT	GA	0.000	-0.277
512.000	1.000	1363.000	3.000	26.000	2.000	5.000	CHO	AF	-1.000	0.814
514.000	1.000	1479.000	2.000	57.000	1.000	5.000	CHO	RW	0.000	1.097
521.000	1.000	843.000	2.000	59.000	1.000	5.000	NOM	MI	0.000	-0.452
523.000	2.000	1115.000	2.000	10.000	1.000	5.000	NOM	GA	1.000	0.210
532.000	2.000	1465.000	3.000	43.000	2.000	5.000	ISA	AF	0.000	1.062
534.000	2.000	1372.000	2.000	4.000	1.000	5.000	ISA	RW	1.000	0.836
541.000	1.000	919.000	1.000	30.000	1.000	5.000	CON	MI	0.000	-0.267
543.000	1.000	852.000	1.000	56.000	1.000	5.000	CON	GA	0.000	-0.430
552.000	2.000	758.000	2.000	48.000	2.000	5.000	DOT	AF	0.000	-0.659
554.000	2.000	445.000	2.000	42.000	1.000	5.000	DOT	RW	1.000	-1.421

Table C.1 (continued) - Subject 219

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	3.000	1493.000	3.000	47.000	1.000	1.000	CHO	AF	2.000	0.163
114.000	5.000	1475.000	3.000	36.000	3.000	1.000	CHO	RW	2.000	0.140
121.000	5.000	962.000	2.000	8.000	6.000	1.000	NOM	MI	-1.000	-0.504
123.000	5.000	878.000	3.000	37.000	5.000	1.000	NOM	GA	0.000	-0.610
132.000	6.000	1002.000	3.000	12.000	3.000	1.000	ISA	AF	3.000	-0.454
134.000	5.000	900.000	3.000	19.000	4.000	1.000	ISA	RW	1.000	-0.582
141.000	6.000	687.000	1.000	56.000	6.000	1.000	CON	MI	0.000	-0.850
143.000	5.000	1723.000	3.000	9.000	2.000	1.000	CON	GA	3.000	0.452
152.000	5.000	1238.000	3.000	18.000	1.000	1.000	DOT	AF	4.000	-0.157
154.000	6.000	2422.000	2.000	5.000	1.000	1.000	DOT	RW	5.000	1.330
211.100	2.000	698.000	1.000	17.000	2.000	2.100	CHO	MI	0.000	-0.836
211.200	2.000	1621.000	1.000	3.000	2.000	2.200	CHO	MI	0.000	0.324
213.100	2.000	2400.000	2.000	24.000	5.000	2.100	CHO	GA	-3.000	1.303
213.200	3.000	969.000	3.000	53.000	3.000	2.200	CHO	GA	0.000	-0.495
222.100	1.000	2579.000	2.000	30.000	6.000	2.100	NOM	AF	-5.000	1.527
222.200	4.000	1226.000	1.000	39.000	1.000	2.200	NOM	AF	3.000	-0.173
224.100	3.000	1039.000	4.000	50.000	6.000	2.100	NOM	RW	-3.000	-0.407
224.200	6.000	2520.000	1.000	7.000	1.000	2.200	NOM	RW	5.000	1.453
231.100	3.000	719.000	2.000	27.000	3.000	2.100	ISA	MI	0.000	-0.810
231.200	4.000	2548.000	1.000	41.000	2.000	2.200	ISA	MI	2.000	1.488
233.100	2.000	2788.000	2.000	14.000	5.000	2.100	ISA	GA	-3.000	1.790
233.200	4.000	1506.000	3.000	51.000	3.000	2.200	ISA	GA	1.000	0.179
242.100	3.000	365.000	1.000	52.000	3.000	2.100	CON	AF	0.000	-1.254
242.200	1.000	1736.000	2.000	1.000	1.000	2.200	CON	AF	0.000	0.468
244.100	5.000	1035.000	1.000	55.000	5.000	2.100	CON	RW	0.000	-0.413
244.200	1.000	802.000	1.000	58.000	1.000	2.200	CON	RW	0.000	-0.705
251.100	2.000	607.000	1.000	54.000	2.000	2.100	DOT	MI	0.000	-0.950
251.200	2.000	816.000	1.000	49.000	2.000	2.200	DOT	MI	0.000	-0.688
253.100	5.000	1318.000	3.000	34.000	5.000	2.100	DOT	GA	0.000	-0.057
253.200	4.000	2078.000	4.000	16.000	3.000	2.200	DOT	GA	1.000	0.898
312.000	5.000	1995.000	3.000	28.000	3.000	3.000	CHO	AF	2.000	0.794
314.000	2.000	4760.000	2.000	6.000	4.000	3.000	CHO	RW	-2.000	4.268
321.000	2.000	2357.000	2.000	32.000	4.000	3.000	NOM	MI	-2.000	1.248
323.000	2.000	538.000	1.000	57.000	6.000	3.000	NOM	GA	-4.000	-1.037
332.000	3.000	1827.000	3.000	43.000	3.000	3.000	ISA	AF	0.000	0.583
334.000	1.000	603.000	2.000	45.000	5.000	3.000	ISA	RW	-4.000	-0.955
341.000	1.000	1137.000	3.000	31.000	4.000	3.000	CON	MI	-3.000	-0.284
343.000	2.000	1465.000	1.000	23.000	2.000	3.000	CON	GA	0.000	0.128
352.000	4.000	1432.000	2.000	11.000	4.000	3.000	DOT	AF	0.000	0.086
354.000	6.000	667.000	4.000	33.000	6.000	3.000	DOT	RW	0.000	-0.875
411.000	2.000	773.000	2.000	26.000	2.000	4.000	CHO	MI	0.000	-0.742
413.000	1.000	869.000	1.000	20.000	1.000	4.000	CHO	GA	0.000	-0.621
422.000	4.000	1916.000	2.000	4.000	4.000	4.000	NOM	AF	0.000	0.694
424.000	4.000	812.000	3.000	25.000	4.000	4.000	NOM	RW	0.000	-0.693
431.000	2.000	833.000	1.000	21.000	2.000	4.000	ISA	MI	0.000	-0.666
433.000	1.000	1291.000	1.000	42.000	1.000	4.000	ISA	GA	0.000	-0.091
442.000	3.000	858.000	3.000	44.000	3.000	4.000	CON	AF	0.000	-0.635
444.000	1.000	1035.000	1.000	22.000	1.000	4.000	CON	RW	0.000	-0.413
451.000	2.000	806.000	2.000	15.000	2.000	4.000	DOT	MI	0.000	-0.700
453.000	1.000	873.000	1.000	46.000	1.000	4.000	DOT	GA	0.000	-0.616
512.000	2.000	1203.000	3.000	38.000	2.000	5.000	CHO	AF	0.000	-0.201
514.000	3.000	1764.000	4.000	10.000	1.000	5.000	CHO	RW	2.000	0.503
521.000	2.000	439.000	3.000	59.000	1.000	5.000	NOM	MI	1.000	-1.161
523.000	2.000	839.000	1.000	48.000	1.000	5.000	NOM	GA	1.000	-0.659
532.000	2.000	1615.000	3.000	40.000	2.000	5.000	ISA	AF	0.000	0.316
534.000	2.000	2076.000	2.000	2.000	1.000	5.000	ISA	RW	1.000	0.895
541.000	1.000	1019.000	1.000	35.000	1.000	5.000	CON	MI	0.000	-0.433
543.000	1.000	553.000	2.000	60.000	1.000	5.000	CON	GA	0.000	-1.018
552.000	1.000	2915.000	4.000	13.000	2.000	5.000	DOT	AF	-1.000	1.950
554.000	3.000	379.000	4.000	29.000	1.000	5.000	DOT	RW	2.000	-1.237

Table C.1 (continued) - Subject 220

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	5.000	838.000	2.000	54.000	1.000	1.000	CHO	AF	4.000	-0.226
121.000	6.000	994.000	2.000	37.000	6.000	1.000	NOM	MI	0.000	0.019
123.000	3.000	929.000	2.000	55.000	5.000	1.000	NOM	GA	-2.000	-0.083
132.000	4.000	922.000	2.000	50.000	3.000	1.000	ISA	AF	1.000	-0.094
141.000	7.000	906.000	2.000	33.000	6.000	1.000	CON	MI	1.000	-0.119
143.000	1.000	779.000	2.000	24.000	2.000	1.000	CON	GA	-1.000	-0.318
152.000	6.000	553.000	3.000	57.000	1.000	1.000	DOT	AF	5.000	-0.673
154.000	1.000	1342.000	2.000	45.000	1.000	1.000	DOT	RW	0.000	0.565
211.100	2.000	377.000	1.000	47.000	2.000	2.100	CHO	MI	0.000	-0.949
211.200	6.000	889.000	1.000	32.000	2.000	2.200	CHO	MI	4.000	-0.146
213.100	6.000	1245.000	2.000	16.000	5.000	2.100	CHO	GA	1.000	0.413
213.200	3.000	3337.000	1.000	9.000	3.000	2.200	CHO	GA	0.000	3.695
222.100	6.000	777.000	1.000	56.000	6.000	2.100	NOM	AF	0.000	-0.321
222.200	1.000	931.000	1.000	48.000	1.000	2.200	NOM	AF	0.000	-0.080
224.100	6.000	615.000	3.000	46.000	6.000	2.100	NOM	RW	0.000	-0.575
224.200	6.000	624.000	1.000	60.000	1.000	2.200	NOM	RW	5.000	-0.561
231.100	3.000	450.000	1.000	44.000	3.000	2.100	ISA	MI	0.000	-0.834
231.200	6.000	488.000	1.000	43.000	2.000	2.200	ISA	MI	4.000	-0.775
233.100	5.000	970.000	1.000	3.000	5.000	2.100	ISA	GA	0.000	-0.019
233.200	3.000	1324.000	2.000	38.000	3.000	2.200	ISA	GA	0.000	0.537
242.100	2.000	1081.000	3.000	8.000	3.000	2.100	CON	AF	-1.000	0.156
242.200	1.000	1840.000	2.000	31.000	1.000	2.200	CON	AF	0.000	1.346
251.100	2.000	341.000	2.000	23.000	2.000	2.100	DOT	MI	0.000	-1.005
251.200	6.000	654.000	2.000	25.000	2.000	2.200	DOT	MI	4.000	-0.514
253.100	5.000	1395.000	2.000	6.000	5.000	2.100	DOT	GA	0.000	0.648
253.200	4.000	863.000	1.000	28.000	3.000	2.200	DOT	GA	1.000	-0.186
312.000	2.000	1336.000	3.000	19.000	3.000	3.000	CHO	AF	-1.000	0.556
321.000	2.000	3030.000	4.000	4.000	4.000	3.000	NOM	MI	-2.000	3.213
323.000	6.000	788.000	2.000	17.000	6.000	3.000	NOM	GA	0.000	-0.304
332.000	2.000	854.000	2.000	58.000	3.000	3.000	ISA	AF	-1.000	-0.201
341.000	4.000	1369.000	2.000	41.000	4.000	3.000	CON	MI	0.000	0.607
343.000	3.000	2836.000	3.000	39.000	2.000	3.000	CON	GA	1.000	2.909
352.000	3.000	1224.000	4.000	27.000	4.000	3.000	DOT	AF	-1.000	0.380
354.000	5.000	1643.000	3.000	13.000	6.000	3.000	DOT	RW	-1.000	1.037
411.000	2.000	690.000	1.000	34.000	2.000	4.000	CHO	MI	0.000	-0.458
413.000	1.000	573.000	2.000	7.000	1.000	4.000	CHO	GA	0.000	-0.641
422.000	4.000	498.000	1.000	36.000	4.000	4.000	NOM	AF	0.000	-0.759
424.000	4.000	1214.000	2.000	1.000	4.000	4.000	NOM	RW	0.000	0.364
431.000	2.000	579.000	2.000	49.000	2.000	4.000	ISA	MI	0.000	-0.632
433.000	3.000	802.000	2.000	12.000	1.000	4.000	ISA	GA	2.000	-0.282
442.000	4.000	474.000	1.000	42.000	3.000	4.000	CON	AF	1.000	-0.797
451.000	1.000	1003.000	3.000	5.000	2.000	4.000	DOT	MI	-1.000	0.033
453.000	1.000	298.000	2.000	14.000	1.000	4.000	DOT	GA	0.000	-1.073
512.000	2.000	1126.000	2.000	18.000	2.000	5.000	CHO	AF	0.000	0.226
521.000	3.000	397.000	2.000	26.000	1.000	5.000	NOM	MI	2.000	-0.918
523.000	2.000	324.000	2.000	21.000	1.000	5.000	NOM	GA	1.000	-1.032
532.000	3.000	700.000	2.000	51.000	2.000	5.000	ISA	AF	1.000	-0.442
541.000	3.000	1256.000	3.000	2.000	1.000	5.000	CON	MI	2.000	0.430
543.000	1.000	723.000	2.000	40.000	1.000	5.000	CON	GA	0.000	-0.406
552.000	2.000	456.000	2.000	30.000	2.000	5.000	DOT	AF	0.000	-0.825
554.000	3.000	415.000	2.000	15.000	1.000	5.000	DOT	RW	2.000	-0.889

Table C.1 (continued) - Subject 221

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	8.000	833.000	2.000	29.000	1.000	1.000	CHO	AF	7.000	-0.251
121.000	6.000	815.000	2.000	23.000	6.000	1.000	NOM	MI	0.000	-0.303
123.000	5.000	939.000	2.000	12.000	5.000	1.000	NOM	GA	0.000	0.060
132.000	7.000	1098.000	2.000	28.000	3.000	1.000	ISA	AF	4.000	0.525
141.000	6.000	778.000	2.000	26.000	6.000	1.000	CON	MI	0.000	-0.412
143.000	7.000	1283.000	3.000	32.000	2.000	1.000	CON	GA	5.000	1.067
152.000	4.000	897.000	2.000	50.000	1.000	1.000	DOT	AF	3.000	-0.063
154.000	4.000	1480.000	2.000	33.000	1.000	1.000	DOT	RW	3.000	1.644
211.100	2.000	446.000	1.000	53.000	2.000	2.100	CHO	MI	0.000	-1.384
211.200	2.000	639.000	1.000	43.000	2.000	2.200	CHO	MI	0.000	-0.819
213.100	5.000	750.000	2.000	57.000	5.000	2.100	CHO	GA	0.000	-0.494
213.200	4.000	1315.000	1.000	35.000	3.000	2.200	CHO	GA	1.000	1.161
222.100	3.000	1027.000	2.000	49.000	6.000	2.100	NOM	AF	-3.000	0.318
222.200	6.000	1247.000	1.000	11.000	1.000	2.200	NOM	AF	5.000	0.962
224.100	5.000	642.000	2.000	6.000	6.000	2.100	NOM	RW	-1.000	-0.810
224.200	6.000	648.000	1.000	38.000	1.000	2.200	NOM	RW	5.000	-0.793
231.100	3.000	527.000	1.000	41.000	3.000	2.100	ISA	MI	0.000	-1.147
231.200	2.000	1421.000	1.000	24.000	2.000	2.200	ISA	MI	0.000	1.471
233.100	5.000	623.000	1.000	58.000	5.000	2.100	ISA	GA	0.000	-0.866
233.200	4.000	691.000	1.000	42.000	3.000	2.200	ISA	GA	1.000	-0.667
242.100	3.000	701.000	1.000	51.000	3.000	2.100	CON	AF	0.000	-0.637
242.200	6.000	804.000	2.000	37.000	1.000	2.200	CON	AF	5.000	-0.336
251.100	2.000	504.000	2.000	48.000	2.000	2.100	DOT	MI	0.000	-1.214
251.200	5.000	1338.000	2.000	14.000	2.000	2.200	DOT	MI	3.000	1.228
253.100	2.000	647.000	1.000	34.000	5.000	2.100	DOT	GA	-3.000	-0.795
253.200	3.000	991.000	1.000	17.000	3.000	2.200	DOT	GA	0.000	0.212
312.000	3.000	515.000	2.000	59.000	3.000	3.000	CHO	AF	0.000	-1.182
321.000	2.000	1524.000	1.000	22.000	4.000	3.000	NOM	MI	-2.000	1.773
323.000	6.000	1671.000	1.000	45.000	6.000	3.000	NOM	GA	0.000	2.204
332.000	5.000	825.000	1.000	60.000	3.000	3.000	ISA	AF	2.000	-0.274
341.000	1.000	1204.000	1.000	15.000	4.000	3.000	CON	MI	-3.000	0.836
343.000	3.000	965.000	2.000	25.000	2.000	3.000	CON	GA	1.000	0.136
352.000	1.000	1360.000	1.000	4.000	4.000	3.000	DOT	AF	-3.000	1.293
354.000	6.000	1147.000	2.000	36.000	6.000	3.000	DOT	RW	0.000	0.669
411.000	2.000	807.000	1.000	7.000	2.000	4.000	CHO	MI	0.000	-0.327
413.000	1.000	974.000	1.000	54.000	1.000	4.000	CHO	GA	0.000	0.162
422.000	3.000	855.000	2.000	8.000	4.000	4.000	NOM	AF	-1.000	-0.186
424.000	4.000	1082.000	1.000	47.000	4.000	4.000	NOM	RW	0.000	0.479
431.000	2.000	560.000	1.000	19.000	2.000	4.000	ISA	MI	0.000	-1.050
433.000	1.000	685.000	1.000	30.000	1.000	4.000	ISA	GA	0.000	-0.684
442.000	3.000	934.000	2.000	44.000	3.000	4.000	CON	AF	0.000	0.045
451.000	1.000	431.000	1.000	40.000	2.000	4.000	DOT	MI	-1.000	-1.428
453.000	1.000	393.000	1.000	39.000	1.000	4.000	DOT	GA	0.000	-1.539
512.000	1.000	891.000	1.000	46.000	2.000	5.000	CHO	AF	-1.000	-0.081
521.000	1.000	1603.000	2.000	2.000	1.000	5.000	NOM	MI	0.000	2.005
523.000	2.000	675.000	2.000	16.000	1.000	5.000	NOM	GA	1.000	-0.713
532.000	2.000	665.000	2.000	18.000	2.000	5.000	ISA	AF	0.000	-0.743
541.000	1.000	529.000	1.000	31.000	1.000	5.000	CON	MI	0.000	-1.141
543.000	1.000	635.000	2.000	27.000	1.000	5.000	CON	GA	0.000	-0.831
552.000	2.000	1315.000	1.000	3.000	2.000	5.000	DOT	AF	0.000	1.161
554.000	2.000	1519.000	2.000	1.000	1.000	5.000	DOT	RW	1.000	1.759

Table C.1 (continued) - Subject 222

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	2.000	1380.000	2.000	29.000	1.000	1.000	CHO	AF	1.000	1.056
114.000	5.000	2055.000	2.000	10.000	3.000	1.000	CHO	RW	2.000	2.506
121.000	5.000	681.000	2.000	23.000	6.000	1.000	NOM	MI	-1.000	-0.446
123.000	4.000	784.000	2.000	12.000	5.000	1.000	NOM	GA	-1.000	-0.225
132.000	3.000	1333.000	2.000	28.000	3.000	1.000	ISA	AF	0.000	0.955
134.000	2.000	892.000	2.000	55.000	4.000	1.000	ISA	RW	-2.000	0.007
141.000	5.000	786.000	2.000	26.000	6.000	1.000	CON	MI	-1.000	-0.221
143.000	7.000	1493.000	2.000	32.000	2.000	1.000	CON	GA	5.000	1.298
152.000	3.000	556.000	2.000	50.000	1.000	1.000	DOT	AF	2.000	-0.715
154.000	1.000	1093.000	1.000	33.000	1.000	1.000	DOT	RW	0.000	0.439
211.100	2.000	414.000	1.000	53.000	2.000	2.100	CHO	MI	0.000	-1.020
211.200	2.000	574.000	1.000	43.000	2.000	2.200	CHO	MI	0.000	-0.676
213.100	2.000	601.000	1.000	57.000	5.000	2.100	CHO	GA	-3.000	-0.618
213.200	3.000	1775.000	1.000	35.000	3.000	2.200	CHO	GA	0.000	1.904
222.100	1.000	470.000	1.000	49.000	6.000	2.100	NOM	AF	-5.000	-0.900
222.200	1.000	1191.000	1.000	11.000	1.000	2.200	NOM	AF	0.000	0.650
224.100	5.000	1172.000	1.000	6.000	6.000	2.100	NOM	RW	-1.000	0.609
224.200	1.000	1243.000	1.000	38.000	1.000	2.200	NOM	RW	0.000	0.761
231.100	3.000	317.000	1.000	41.000	3.000	2.100	ISA	MI	0.000	-1.228
231.200	2.000	1061.000	1.000	24.000	2.000	2.200	ISA	MI	0.000	0.370
233.100	2.000	575.000	1.000	58.000	5.000	2.100	ISA	GA	-3.000	-0.674
233.200	3.000	415.000	1.000	42.000	3.000	2.200	ISA	GA	0.000	-1.018
242.100	3.000	420.000	1.000	51.000	3.000	2.100	CON	AF	0.000	-1.007
242.200	4.000	1073.000	1.000	37.000	1.000	2.200	CON	AF	3.000	0.396
244.100	5.000	709.000	1.000	5.000	5.000	2.100	CON	RW	0.000	-0.386
244.200	6.000	943.000	1.000	52.000	1.000	2.200	CON	RW	5.000	0.117
251.100	2.000	385.000	1.000	48.000	2.000	2.100	DOT	MI	0.000	-1.082
251.200	2.000	972.000	1.000	14.000	2.000	2.200	DOT	MI	0.000	0.179
253.100	5.000	994.000	1.000	34.000	5.000	2.100	DOT	GA	0.000	0.226
253.200	4.000	1966.000	1.000	17.000	3.000	2.200	DOT	GA	1.000	2.315
312.000	3.000	1613.000	2.000	59.000	3.000	3.000	CHO	AF	0.000	1.556
314.000	4.000	1247.000	1.000	9.000	4.000	3.000	CHO	RW	0.000	0.770
321.000	2.000	1684.000	2.000	22.000	4.000	3.000	NOM	MI	-2.000	1.709
323.000	2.000	590.000	1.000	45.000	6.000	3.000	NOM	GA	-4.000	-0.642
332.000	5.000	872.000	2.000	60.000	3.000	3.000	ISA	AF	2.000	-0.036
334.000	5.000	2121.000	2.000	20.000	5.000	3.000	ISA	RW	0.000	2.648
341.000	3.000	908.000	1.000	15.000	4.000	3.000	CON	MI	-1.000	0.041
343.000	6.000	1012.000	1.000	25.000	2.000	3.000	CON	GA	4.000	0.265
352.000	4.000	1899.000	1.000	4.000	4.000	3.000	DOT	AF	0.000	2.171
354.000	3.000	699.000	1.000	36.000	6.000	3.000	DOT	RW	-3.000	-0.408
411.000	2.000	935.000	1.000	7.000	2.000	4.000	CHO	MI	0.000	0.099
413.000	1.000	333.000	1.000	54.000	1.000	4.000	CHO	GA	0.000	-1.194
422.000	4.000	1117.000	2.000	8.000	4.000	4.000	NOM	AF	0.000	0.491
424.000	4.000	617.000	2.000	47.000	4.000	4.000	NOM	RW	0.000	-0.584
431.000	2.000	646.000	1.000	19.000	2.000	4.000	ISA	MI	0.000	-0.521
433.000	1.000	454.000	1.000	30.000	1.000	4.000	ISA	GA	0.000	-0.934
442.000	3.000	551.000	1.000	44.000	3.000	4.000	CON	AF	0.000	-0.726
444.000	1.000	958.000	2.000	21.000	1.000	4.000	CON	RW	0.000	0.149
451.000	2.000	324.000	1.000	40.000	2.000	4.000	DOT	MI	0.000	-1.213
453.000	1.000	414.000	1.000	39.000	1.000	4.000	DOT	GA	0.000	-1.020
512.000	2.000	837.000	1.000	46.000	2.000	5.000	CHO	AF	0.000	-0.111
514.000	1.000	758.000	1.000	56.000	1.000	5.000	CHO	RW	0.000	-0.281
521.000	1.000	770.000	1.000	2.000	1.000	5.000	NOM	MI	0.000	-0.255
523.000	2.000	620.000	2.000	16.000	1.000	5.000	NOM	GA	1.000	-0.577
532.000	2.000	494.000	1.000	18.000	2.000	5.000	ISA	AF	0.000	-0.848
534.000	1.000	419.000	1.000	13.000	1.000	5.000	ISA	RW	0.000	-1.009
541.000	1.000	608.000	1.000	31.000	1.000	5.000	CON	MI	0.000	-0.603
543.000	1.000	463.000	1.000	27.000	1.000	5.000	CON	GA	0.000	-0.915
552.000	2.000	542.000	1.000	3.000	2.000	5.000	DOT	AF	0.000	-0.745
554.000	1.000	494.000	2.000	1.000	1.000	5.000	DOT	RW	0.000	-0.848

Table C.1 (continued) - Subject 223

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	1.000	1232.000	1.000	26.000	1.000	1.000	CHO	AF	0.000	0.066
114.000	1.000	1591.000	1.000	31.000	3.000	1.000	CHO	RW	-2.000	0.566
121.000	4.000	1090.000	1.000	30.000	6.000	1.000	NOM	MI	-2.000	-0.132
123.000	5.000	936.000	2.000	51.000	5.000	1.000	NOM	GA	0.000	-0.346
132.000	3.000	1332.000	2.000	22.000	3.000	1.000	ISA	AF	0.000	0.205
134.000	3.000	2864.000	2.000	2.000	4.000	1.000	ISA	RW	-1.000	2.338
141.000	5.000	1306.000	1.000	21.000	6.000	1.000	CON	MI	-1.000	0.169
143.000	3.000	1578.000	1.000	19.000	2.000	1.000	CON	GA	1.000	0.548
152.000	4.000	3537.000	3.000	4.000	1.000	1.000	DOT	AF	3.000	3.275
154.000	3.000	1425.000	2.000	6.000	1.000	1.000	DOT	RW	2.000	0.335
211.100	2.000	533.000	1.000	29.000	2.000	2.100	CHO	MI	0.000	-0.907
211.200	2.000	1707.000	1.000	9.000	2.000	2.200	CHO	MI	0.000	0.727
213.100	2.000	1612.000	1.000	7.000	5.000	2.100	CHO	GA	-3.000	0.595
213.200	3.000	603.000	1.000	48.000	3.000	2.200	CHO	GA	0.000	-0.810
222.100	6.000	1573.000	1.000	25.000	6.000	2.100	NOM	AF	0.000	0.541
222.200	4.000	1298.000	1.000	11.000	1.000	2.200	NOM	AF	3.000	0.158
224.100	6.000	1212.000	1.000	28.000	6.000	2.100	NOM	RW	0.000	0.038
224.200	1.000	849.000	1.000	60.000	1.000	2.200	NOM	RW	0.000	-0.467
231.100	3.000	587.000	1.000	43.000	3.000	2.100	ISA	MI	0.000	-0.832
231.200	2.000	837.000	1.000	53.000	2.000	2.200	ISA	MI	0.000	-0.484
233.100	5.000	2037.000	2.000	3.000	5.000	2.100	ISA	GA	0.000	1.187
233.200	3.000	1316.000	1.000	44.000	3.000	2.200	ISA	GA	0.000	0.183
242.100	3.000	754.000	1.000	20.000	3.000	2.100	CON	AF	0.000	-0.599
242.200	4.000	1302.000	1.000	38.000	1.000	2.200	CON	AF	3.000	0.164
244.100	5.000	562.000	1.000	32.000	5.000	2.100	CON	RW	0.000	-0.867
244.200	6.000	1184.000	1.000	42.000	1.000	2.200	CON	RW	5.000	-0.001
251.100	2.000	579.000	1.000	50.000	2.000	2.100	DOT	MI	0.000	-0.843
251.200	2.000	668.000	1.000	10.000	2.000	2.200	DOT	MI	0.000	-0.719
253.100	6.000	1397.000	1.000	24.000	5.000	2.100	DOT	GA	1.000	0.296
253.200	3.000	919.000	1.000	59.000	3.000	2.200	DOT	GA	0.000	-0.370
312.000	3.000	785.000	2.000	41.000	3.000	3.000	CHO	AF	0.000	-0.556
314.000	4.000	2847.000	2.000	57.000	4.000	3.000	CHO	RW	0.000	2.315
321.000	4.000	365.000	1.000	52.000	4.000	3.000	NOM	MI	0.000	-1.141
323.000	6.000	2223.000	1.000	1.000	6.000	3.000	NOM	GA	0.000	1.446
332.000	1.000	3615.000	4.000	27.000	3.000	3.000	ISA	AF	-2.000	3.384
334.000	5.000	1838.000	2.000	49.000	5.000	3.000	ISA	RW	0.000	0.910
341.000	4.000	1565.000	1.000	33.000	4.000	3.000	CON	MI	0.000	0.530
343.000	3.000	816.000	2.000	37.000	2.000	3.000	CON	GA	1.000	-0.513
352.000	4.000	960.000	2.000	46.000	4.000	3.000	DOT	AF	0.000	-0.313
354.000	4.000	2272.000	1.000	14.000	6.000	3.000	DOT	RW	-2.000	1.514
411.000	2.000	714.000	1.000	39.000	2.000	4.000	CHO	MI	0.000	-0.655
413.000	1.000	854.000	1.000	5.000	1.000	4.000	CHO	GA	0.000	-0.460
422.000	4.000	555.000	1.000	15.000	4.000	4.000	NOM	AF	0.000	-0.877
424.000	4.000	434.000	1.000	16.000	4.000	4.000	NOM	RW	0.000	-1.045
431.000	2.000	634.000	1.000	13.000	2.000	4.000	ISA	MI	0.000	-0.767
433.000	1.000	393.000	1.000	54.000	1.000	4.000	ISA	GA	0.000	-1.102
442.000	3.000	764.000	1.000	35.000	3.000	4.000	CON	AF	0.000	-0.586
444.000	1.000	835.000	1.000	18.000	1.000	4.000	CON	RW	0.000	-0.487
451.000	2.000	489.000	1.000	45.000	2.000	4.000	DOT	MI	0.000	-0.968
453.000	1.000	437.000	1.000	34.000	1.000	4.000	DOT	GA	0.000	-1.041
512.000	3.000	1156.000	2.000	36.000	2.000	5.000	CHO	AF	1.000	-0.040
514.000	1.000	1181.000	2.000	56.000	1.000	5.000	CHO	RW	0.000	-0.005
521.000	3.000	502.000	1.000	55.000	1.000	5.000	NOM	MI	2.000	-0.950
523.000	2.000	705.000	2.000	47.000	1.000	5.000	NOM	GA	1.000	-0.668
532.000	2.000	832.000	1.000	40.000	2.000	5.000	ISA	AF	0.000	-0.491
534.000	3.000	1401.000	2.000	17.000	1.000	5.000	ISA	RW	2.000	0.301
541.000	1.000	737.000	1.000	23.000	1.000	5.000	CON	MI	0.000	-0.623
543.000	1.000	738.000	1.000	58.000	1.000	5.000	CON	GA	0.000	-0.622
552.000	2.000	755.000	2.000	12.000	2.000	5.000	DOT	AF	0.000	-0.598
554.000	3.000	1249.000	3.000	8.000	1.000	5.000	DOT	RW	2.000	0.090

Table C.1 (continued) - Subject 224

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	1.000	2095.000	2.000	2.000	1.000	1.000	CHO	AF	0.000	1.345
114.000	3.000	1082.000	2.000	35.000	3.000	1.000	CHO	RW	0.000	-0.210
121.000	5.000	1092.000	2.000	24.000	6.000	1.000	NOM	MI	-1.000	-0.195
123.000	4.000	732.000	2.000	45.000	5.000	1.000	NOM	GA	-1.000	-0.747
132.000	5.000	1087.000	2.000	46.000	3.000	1.000	ISA	AF	2.000	-0.202
134.000	5.000	1212.000	2.000	58.000	4.000	1.000	ISA	RW	1.000	-0.010
141.000	4.000	1343.000	2.000	3.000	6.000	1.000	CON	MI	-2.000	0.191
143.000	1.000	1061.000	2.000	22.000	2.000	1.000	CON	GA	-1.000	-0.242
152.000	4.000	701.000	1.000	37.000	1.000	1.000	DOT	AF	3.000	-0.795
154.000	1.000	1141.000	1.000	40.000	1.000	1.000	DOT	RW	0.000	-0.119
211.100	2.000	894.000	1.000	8.000	2.000	2.100	CHO	MI	0.000	-0.499
211.200	2.000	938.000	1.000	54.000	2.000	2.200	CHO	MI	0.000	-0.431
213.100	2.000	2496.000	2.000	14.000	5.000	2.100	CHO	GA	-3.000	1.961
213.200	5.000	2004.000	1.000	16.000	3.000	2.200	CHO	GA	2.000	1.205
222.100	1.000	2278.000	1.000	11.000	6.000	2.100	NOM	AF	-5.000	1.626
222.200	1.000	1070.000	1.000	15.000	1.000	2.200	NOM	AF	0.000	-0.228
224.100	6.000	2060.000	1.000	12.000	6.000	2.100	NOM	RW	0.000	1.291
224.200	1.000	657.000	1.000	29.000	1.000	2.200	NOM	RW	0.000	-0.862
231.100	3.000	635.000	1.000	21.000	3.000	2.100	ISA	MI	0.000	-0.896
231.200	2.000	667.000	1.000	38.000	2.000	2.200	ISA	MI	0.000	-0.847
233.100	5.000	800.000	1.000	31.000	5.000	2.100	ISA	GA	0.000	-0.643
233.200	3.000	1379.000	2.000	20.000	3.000	2.200	ISA	GA	0.000	0.246
242.100	3.000	1089.000	1.000	23.000	3.000	2.100	CON	AF	0.000	-0.199
242.200	1.000	1432.000	1.000	9.000	1.000	2.200	CON	AF	0.000	0.327
244.100	5.000	467.000	1.000	60.000	5.000	2.100	CON	RW	0.000	-1.154
244.200	1.000	2424.000	1.000	10.000	1.000	2.200	CON	RW	0.000	1.850
251.100	2.000	594.000	1.000	42.000	2.000	2.100	DOT	MI	0.000	-0.959
251.200	2.000	425.000	1.000	57.000	2.000	2.200	DOT	MI	0.000	-1.219
253.100	2.000	824.000	2.000	52.000	5.000	2.100	DOT	GA	-3.000	-0.606
253.200	4.000	2101.000	1.000	4.000	3.000	2.200	DOT	GA	1.000	1.354
312.000	3.000	899.000	1.000	41.000	3.000	3.000	CHO	AF	0.000	-0.491
314.000	4.000	739.000	1.000	27.000	4.000	3.000	CHO	RW	0.000	-0.737
321.000	4.000	1665.000	2.000	43.000	4.000	3.000	NOM	MI	0.000	0.685
323.000	6.000	807.000	1.000	47.000	6.000	3.000	NOM	GA	0.000	-0.632
332.000	3.000	3594.000	1.000	25.000	3.000	3.000	ISA	AF	0.000	3.646
334.000	1.000	1196.000	2.000	50.000	5.000	3.000	ISA	RW	-4.000	-0.035
341.000	4.000	943.000	1.000	5.000	4.000	3.000	CON	MI	0.000	-0.423
343.000	2.000	657.000	1.000	36.000	2.000	3.000	CON	GA	0.000	-0.862
352.000	4.000	710.000	1.000	17.000	4.000	3.000	DOT	AF	0.000	-0.781
354.000	6.000	1398.000	1.000	59.000	6.000	3.000	DOT	RW	0.000	0.275
411.000	2.000	1599.000	1.000	28.000	2.000	4.000	CHO	MI	0.000	0.584
413.000	1.000	1211.000	1.000	7.000	1.000	4.000	CHO	GA	0.000	-0.012
422.000	4.000	664.000	1.000	53.000	4.000	4.000	NOM	AF	0.000	-0.852
424.000	4.000	815.000	1.000	44.000	4.000	4.000	NOM	RW	0.000	-0.620
431.000	2.000	1101.000	1.000	1.000	2.000	4.000	ISA	MI	0.000	-0.181
433.000	1.000	397.000	1.000	39.000	1.000	4.000	ISA	GA	0.000	-1.262
442.000	3.000	2190.000	1.000	34.000	3.000	4.000	CON	AF	0.000	1.491
444.000	1.000	728.000	1.000	51.000	1.000	4.000	CON	RW	0.000	-0.753
451.000	2.000	1237.000	1.000	6.000	2.000	4.000	DOT	MI	0.000	0.028
453.000	1.000	446.000	1.000	48.000	1.000	4.000	DOT	GA	0.000	-1.186
512.000	1.000	2481.000	2.000	19.000	2.000	5.000	CHO	AF	-1.000	1.938
514.000	1.000	1444.000	2.000	56.000	1.000	5.000	CHO	RW	0.000	0.346
521.000	3.000	1271.000	1.000	26.000	1.000	5.000	NOM	MI	2.000	0.080
523.000	2.000	618.000	1.000	55.000	1.000	5.000	NOM	GA	1.000	-0.922
532.000	2.000	2501.000	2.000	13.000	2.000	5.000	ISA	AF	0.000	1.968
534.000	1.000	794.000	2.000	33.000	1.000	5.000	ISA	RW	0.000	-0.652
541.000	1.000	799.000	1.000	30.000	1.000	5.000	CON	MI	0.000	-0.644
543.000	1.000	1294.000	1.000	18.000	1.000	5.000	CON	GA	0.000	0.115
552.000	2.000	985.000	2.000	32.000	2.000	5.000	DOT	AF	0.000	-0.359
554.000	2.000	1166.000	1.000	49.000	1.000	5.000	DOT	RW	1.000	-0.081

Table C.1 (continued) - Subject 225

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	2.000	777.000	1.000	22.000	1.000	1.000	CHO	AF	1.000	-0.576
114.000	5.000	813.000	1.000	5.000	3.000	1.000	CHO	RW	2.000	-0.492
121.000	5.000	817.000	1.000	33.000	6.000	1.000	NOM	MI	-1.000	-0.483
123.000	5.000	926.000	1.000	8.000	5.000	1.000	NOM	GA	0.000	-0.229
132.000	4.000	1182.000	1.000	41.000	3.000	1.000	ISA	AF	1.000	0.368
134.000	4.000	1538.000	1.000	7.000	4.000	1.000	ISA	RW	0.000	1.198
141.000	6.000	764.000	1.000	60.000	6.000	1.000	CON	MI	0.000	-0.606
143.000	2.000	1125.000	2.000	4.000	2.000	1.000	CON	GA	0.000	0.235
152.000	4.000	956.000	1.000	17.000	1.000	1.000	DOT	AF	3.000	-0.159
154.000	1.000	1663.000	1.000	57.000	1.000	1.000	DOT	RW	0.000	1.489
211.100	2.000	1724.000	1.000	10.000	2.000	2.100	CHO	MI	0.000	1.632
211.200	2.000	1282.000	1.000	53.000	2.000	2.200	CHO	MI	0.000	0.601
213.100	5.000	960.000	1.000	48.000	5.000	2.100	CHO	GA	0.000	-0.149
213.200	3.000	738.000	1.000	56.000	3.000	2.200	CHO	GA	0.000	-0.667
222.100	4.000	1072.000	1.000	51.000	6.000	2.100	NOM	AF	-2.000	0.112
222.200	6.000	719.000	1.000	23.000	1.000	2.200	NOM	AF	5.000	-0.711
224.100	5.000	896.000	1.000	26.000	6.000	2.100	NOM	RW	-1.000	-0.299
224.200	6.000	2227.000	1.000	13.000	1.000	2.200	NOM	RW	5.000	2.804
231.100	3.000	682.000	1.000	25.000	3.000	2.100	ISA	MI	0.000	-0.798
231.200	2.000	1058.000	1.000	42.000	2.000	2.200	ISA	MI	0.000	0.079
233.100	5.000	884.000	1.000	9.000	5.000	2.100	ISA	GA	0.000	-0.327
233.200	1.000	1201.000	1.000	15.000	3.000	2.200	ISA	GA	-2.000	0.412
242.100	3.000	849.000	1.000	18.000	3.000	2.100	CON	AF	0.000	-0.408
242.200	1.000	824.000	1.000	49.000	1.000	2.200	CON	AF	0.000	-0.467
244.100	5.000	1625.000	1.000	36.000	5.000	2.100	CON	RW	0.000	1.401
244.200	6.000	1111.000	1.000	27.000	1.000	2.200	CON	RW	5.000	0.203
251.100	2.000	735.000	1.000	31.000	2.000	2.100	DOT	MI	0.000	-0.674
251.200	6.000	1018.000	1.000	29.000	2.000	2.200	DOT	MI	4.000	-0.014
253.100	5.000	967.000	1.000	19.000	5.000	2.100	DOT	GA	0.000	-0.133
253.200	3.000	1498.000	1.000	46.000	3.000	2.200	DOT	GA	0.000	1.105
312.000	5.000	1908.000	2.000	14.000	3.000	3.000	CHO	AF	2.000	2.060
314.000	6.000	1229.000	1.000	47.000	4.000	3.000	CHO	RW	2.000	0.478
321.000	4.000	632.000	1.000	43.000	4.000	3.000	NOM	MI	0.000	-0.914
323.000	6.000	578.000	1.000	24.000	6.000	3.000	NOM	GA	0.000	-1.040
332.000	3.000	1225.000	1.000	45.000	3.000	3.000	ISA	AF	0.000	0.468
334.000	5.000	1472.000	1.000	37.000	5.000	3.000	ISA	RW	0.000	1.044
341.000	4.000	2206.000	2.000	6.000	4.000	3.000	CON	MI	0.000	2.755
343.000	2.000	847.000	1.000	12.000	2.000	3.000	CON	GA	0.000	-0.413
352.000	4.000	1819.000	1.000	2.000	4.000	3.000	DOT	AF	0.000	1.853
354.000	6.000	560.000	1.000	39.000	6.000	3.000	DOT	RW	0.000	-1.082
411.000	2.000	432.000	1.000	34.000	2.000	4.000	CHO	MI	0.000	-1.380
413.000	1.000	1700.000	2.000	30.000	1.000	4.000	CHO	GA	0.000	1.576
422.000	3.000	718.000	1.000	44.000	4.000	4.000	NOM	AF	-1.000	-0.714
424.000	2.000	660.000	1.000	20.000	4.000	4.000	NOM	RW	-2.000	-0.849
431.000	2.000	814.000	1.000	35.000	2.000	4.000	ISA	MI	0.000	-0.490
433.000	1.000	529.000	1.000	58.000	1.000	4.000	ISA	GA	0.000	-1.154
442.000	3.000	652.000	1.000	54.000	3.000	4.000	CON	AF	0.000	-0.867
444.000	1.000	733.000	1.000	50.000	1.000	4.000	CON	RW	0.000	-0.679
451.000	2.000	345.000	1.000	40.000	2.000	4.000	DOT	MI	0.000	-1.583
453.000	1.000	568.000	1.000	59.000	1.000	4.000	DOT	GA	0.000	-1.063
512.000	2.000	1252.000	1.000	28.000	2.000	5.000	CHO	AF	0.000	0.531
514.000	1.000	816.000	1.000	11.000	1.000	5.000	CHO	RW	0.000	-0.485
521.000	3.000	1234.000	1.000	38.000	1.000	5.000	NOM	MI	2.000	0.489
523.000	1.000	1378.000	1.000	55.000	1.000	5.000	NOM	GA	0.000	0.825
532.000	2.000	961.000	1.000	3.000	2.000	5.000	ISA	AF	0.000	-0.147
534.000	2.000	658.000	1.000	21.000	1.000	5.000	ISA	RW	1.000	-0.853
541.000	1.000	540.000	1.000	1.000	1.000	5.000	CON	MI	0.000	-1.129
543.000	1.000	732.000	1.000	32.000	1.000	5.000	CON	GA	0.000	-0.681
552.000	2.000	615.000	1.000	52.000	2.000	5.000	DOT	AF	0.000	-0.954
554.000	2.000	1003.000	1.000	16.000	1.000	5.000	DOT	RW	1.000	-0.049

Table C.1 (continued) - Subject 226

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	1.000	1693.000	2.000	6.000	1.000	1.000	CHO	AF	0.000	2.198
114.000	3.000	781.000	2.000	33.000	3.000	1.000	CHO	RW	0.000	-0.074
121.000	7.000	1018.000	3.000	22.000	6.000	1.000	NOM	MI	1.000	0.516
123.000	6.000	628.000	3.000	32.000	5.000	1.000	NOM	GA	1.000	-0.455
132.000	4.000	725.000	2.000	48.000	3.000	1.000	ISA	AF	1.000	-0.214
134.000	5.000	1838.000	2.000	46.000	4.000	1.000	ISA	RW	1.000	2.559
141.000	6.000	708.000	3.000	31.000	6.000	1.000	CON	MI	0.000	-0.256
143.000	6.000	1249.000	3.000	44.000	2.000	1.000	CON	GA	4.000	1.092
152.000	7.000	1009.000	3.000	26.000	1.000	1.000	DOT	AF	6.000	0.494
154.000	1.000	1149.000	3.000	41.000	1.000	1.000	DOT	RW	0.000	0.843
211.100	2.000	409.000	1.000	20.000	2.000	2.100	CHO	MI	0.000	-1.001
211.200	2.000	482.000	1.000	36.000	2.000	2.200	CHO	MI	0.000	-0.819
213.100	6.000	1320.000	1.000	11.000	5.000	2.100	CHO	GA	1.000	1.268
213.200	3.000	1869.000	1.000	12.000	3.000	2.200	CHO	GA	0.000	2.636
222.100	6.000	569.000	1.000	58.000	6.000	2.100	NOM	AF	0.000	-0.602
222.200	4.000	750.000	1.000	53.000	1.000	2.200	NOM	AF	3.000	-0.151
224.100	6.000	947.000	1.000	37.000	6.000	2.100	NOM	RW	0.000	0.339
224.200	1.000	620.000	1.000	14.000	1.000	2.200	NOM	RW	0.000	-0.475
231.100	3.000	321.000	1.000	38.000	3.000	2.100	ISA	MI	0.000	-1.220
231.200	2.000	784.000	1.000	7.000	2.000	2.200	ISA	MI	0.000	-0.067
233.100	5.000	598.000	1.000	25.000	5.000	2.100	ISA	GA	0.000	-0.530
233.200	3.000	1901.000	1.000	1.000	3.000	2.200	ISA	GA	0.000	2.716
242.100	3.000	529.000	1.000	17.000	3.000	2.100	CON	AF	0.000	-0.702
242.200	4.000	1067.000	1.000	24.000	1.000	2.200	CON	AF	3.000	0.638
244.100	5.000	759.000	1.000	27.000	5.000	2.100	CON	RW	0.000	-0.129
244.200	1.000	860.000	1.000	29.000	1.000	2.200	CON	RW	0.000	0.123
251.100	2.000	594.000	1.000	59.000	2.000	2.100	DOT	MI	0.000	-0.540
251.200	2.000	616.000	1.000	5.000	2.000	2.200	DOT	MI	0.000	-0.485
253.100	5.000	1203.000	1.000	15.000	5.000	2.100	DOT	GA	0.000	0.977
253.200	3.000	1655.000	1.000	50.000	3.000	2.200	DOT	GA	0.000	2.103
312.000	3.000	1032.000	1.000	16.000	3.000	3.000	CHO	AF	0.000	0.551
314.000	1.000	906.000	1.000	39.000	4.000	3.000	CHO	RW	-3.000	0.237
321.000	4.000	550.000	1.000	23.000	4.000	3.000	NOM	MI	0.000	-0.649
323.000	6.000	602.000	1.000	18.000	6.000	3.000	NOM	GA	0.000	-0.520
332.000	5.000	506.000	1.000	28.000	3.000	3.000	ISA	AF	2.000	-0.759
334.000	5.000	932.000	1.000	4.000	5.000	3.000	ISA	RW	0.000	0.302
341.000	4.000	802.000	1.000	56.000	4.000	3.000	CON	MI	0.000	-0.022
343.000	2.000	589.000	1.000	42.000	2.000	3.000	CON	GA	0.000	-0.552
352.000	4.000	762.000	1.000	47.000	4.000	3.000	DOT	AF	0.000	-0.121
354.000	6.000	1082.000	2.000	57.000	6.000	3.000	DOT	RW	0.000	0.676
411.000	2.000	419.000	1.000	8.000	2.000	4.000	CHO	MI	0.000	-0.976
413.000	1.000	488.000	1.000	19.000	1.000	4.000	CHO	GA	0.000	-0.804
422.000	4.000	444.000	1.000	49.000	4.000	4.000	NOM	AF	0.000	-0.913
424.000	2.000	722.000	2.000	34.000	4.000	4.000	NOM	RW	-2.000	-0.221
431.000	2.000	338.000	1.000	60.000	2.000	4.000	ISA	MI	0.000	-1.177
433.000	1.000	544.000	1.000	9.000	1.000	4.000	ISA	GA	0.000	-0.664
442.000	3.000	538.000	2.000	45.000	3.000	4.000	CON	AF	0.000	-0.679
444.000	1.000	505.000	1.000	40.000	1.000	4.000	CON	RW	0.000	-0.762
451.000	2.000	390.000	1.000	51.000	2.000	4.000	DOT	MI	0.000	-1.048
453.000	1.000	625.000	1.000	2.000	1.000	4.000	DOT	GA	0.000	-0.463
512.000	1.000	966.000	2.000	3.000	2.000	5.000	CHO	AF	-1.000	0.387
514.000	1.000	1704.000	2.000	10.000	1.000	5.000	CHO	RW	0.000	2.225
521.000	1.000	763.000	2.000	54.000	1.000	5.000	NOM	MI	0.000	-0.119
523.000	2.000	656.000	1.000	35.000	1.000	5.000	NOM	GA	1.000	-0.385
532.000	2.000	601.000	2.000	43.000	2.000	5.000	ISA	AF	0.000	-0.522
534.000	2.000	672.000	2.000	55.000	1.000	5.000	ISA	RW	1.000	-0.346
541.000	1.000	402.000	1.000	13.000	1.000	5.000	CON	MI	0.000	-1.018
543.000	1.000	528.000	1.000	30.000	1.000	5.000	CON	GA	0.000	-0.704
552.000	2.000	552.000	2.000	52.000	2.000	5.000	DOT	AF	0.000	-0.644
554.000	2.000	373.000	2.000	21.000	1.000	5.000	DOT	RW	1.000	-1.090

Table C.1 (continued) - Subject 227

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	1.000	476.000	1.000	51.000	1.000	1.000	CHO	AF	0.000	-0.950
114.000	3.000	985.000	2.000	27.000	3.000	1.000	CHO	RW	0.000	-0.049
121.000	6.000	541.000	2.000	35.000	6.000	1.000	NOM	MI	0.000	-0.835
123.000	5.000	957.000	2.000	31.000	5.000	1.000	NOM	GA	0.000	-0.098
132.000	3.000	951.000	2.000	22.000	3.000	1.000	ISA	AF	0.000	-0.109
134.000	2.000	1455.000	1.000	24.000	4.000	1.000	ISA	RW	-2.000	0.784
141.000	7.000	920.000	2.000	10.000	6.000	1.000	CON	MI	1.000	-0.164
143.000	4.000	836.000	2.000	59.000	2.000	1.000	CON	GA	2.000	-0.313
152.000	7.000	878.000	2.000	4.000	1.000	1.000	DOT	AF	6.000	-0.238
154.000	2.000	1026.000	2.000	18.000	1.000	1.000	DOT	RW	1.000	0.024
211.100	2.000	494.000	1.000	39.000	2.000	2.100	CHO	MI	0.000	-0.918
211.200	2.000	1159.000	1.000	14.000	2.000	2.200	CHO	MI	0.000	0.260
213.100	5.000	879.000	1.000	12.000	5.000	2.100	CHO	GA	0.000	-0.236
213.200	7.000	1430.000	1.000	42.000	3.000	2.200	CHO	GA	4.000	0.740
222.100	4.000	1017.000	1.000	26.000	6.000	2.100	NOM	AF	-2.000	0.008
222.200	4.000	1257.000	2.000	13.000	1.000	2.200	NOM	AF	3.000	0.433
224.100	5.000	944.000	1.000	23.000	6.000	2.100	NOM	RW	-1.000	-0.121
224.200	1.000	1418.000	1.000	17.000	1.000	2.200	NOM	RW	0.000	0.718
231.100	3.000	590.000	1.000	2.000	3.000	2.100	ISA	MI	0.000	-0.748
231.200	2.000	965.000	1.000	8.000	2.000	2.200	ISA	MI	0.000	-0.084
233.100	5.000	899.000	1.000	37.000	5.000	2.100	ISA	GA	0.000	-0.201
233.200	5.000	1381.000	2.000	41.000	3.000	2.200	ISA	GA	2.000	0.653
242.100	3.000	379.000	1.000	58.000	3.000	2.100	CON	AF	0.000	-1.122
242.200	4.000	930.000	2.000	52.000	1.000	2.200	CON	AF	3.000	-0.146
244.100	5.000	702.000	1.000	47.000	5.000	2.100	CON	RW	0.000	-0.550
244.200	4.000	1918.000	1.000	9.000	1.000	2.200	CON	RW	3.000	1.604
251.100	2.000	645.000	1.000	29.000	2.000	2.100	DOT	MI	0.000	-0.651
251.200	2.000	624.000	1.000	15.000	2.000	2.200	DOT	MI	0.000	-0.688
253.100	2.000	721.000	2.000	11.000	5.000	2.100	DOT	GA	-3.000	-0.516
253.200	4.000	1654.000	2.000	53.000	3.000	2.200	DOT	GA	1.000	1.136
312.000	3.000	1195.000	2.000	36.000	3.000	3.000	CHO	AF	0.000	0.323
314.000	4.000	1434.000	1.000	28.000	4.000	3.000	CHO	RW	0.000	0.747
321.000	4.000	1435.000	1.000	21.000	4.000	3.000	NOM	MI	0.000	0.748
323.000	6.000	1845.000	1.000	19.000	6.000	3.000	NOM	GA	0.000	1.475
332.000	3.000	3741.000	3.000	16.000	3.000	3.000	ISA	AF	0.000	4.834
334.000	5.000	1191.000	1.000	30.000	5.000	3.000	ISA	RW	0.000	0.316
341.000	3.000	948.000	2.000	48.000	4.000	3.000	CON	MI	-1.000	-0.114
343.000	5.000	1744.000	2.000	7.000	2.000	3.000	CON	GA	3.000	1.296
352.000	4.000	1472.000	2.000	25.000	4.000	3.000	DOT	AF	0.000	0.814
354.000	6.000	514.000	1.000	55.000	6.000	3.000	DOT	RW	0.000	-0.883
411.000	2.000	624.000	1.000	56.000	2.000	4.000	CHO	MI	0.000	-0.688
413.000	1.000	585.000	1.000	50.000	1.000	4.000	CHO	GA	0.000	-0.757
422.000	4.000	575.000	1.000	40.000	4.000	4.000	NOM	AF	0.000	-0.775
424.000	4.000	514.000	1.000	43.000	4.000	4.000	NOM	RW	0.000	-0.883
431.000	2.000	835.000	1.000	45.000	2.000	4.000	ISA	MI	0.000	-0.314
433.000	1.000	412.000	1.000	34.000	1.000	4.000	ISA	GA	0.000	-1.064
442.000	3.000	836.000	2.000	3.000	3.000	4.000	CON	AF	0.000	-0.313
444.000	1.000	680.000	1.000	32.000	1.000	4.000	CON	RW	0.000	-0.589
451.000	2.000	723.000	1.000	5.000	2.000	4.000	DOT	MI	0.000	-0.513
453.000	1.000	372.000	1.000	33.000	1.000	4.000	DOT	GA	0.000	-1.135
512.000	1.000	2483.000	2.000	46.000	2.000	5.000	CHO	AF	-1.000	2.605
514.000	1.000	1189.000	2.000	54.000	1.000	5.000	CHO	RW	0.000	0.313
521.000	1.000	557.000	1.000	44.000	1.000	5.000	NOM	MI	0.000	-0.807
523.000	2.000	580.000	1.000	57.000	1.000	5.000	NOM	GA	1.000	-0.766
532.000	2.000	589.000	1.000	20.000	2.000	5.000	ISA	AF	0.000	-0.750
534.000	1.000	1435.000	1.000	6.000	1.000	5.000	ISA	RW	0.000	0.748
541.000	1.000	739.000	1.000	1.000	1.000	5.000	CON	MI	0.000	-0.484
543.000	1.000	650.000	1.000	49.000	1.000	5.000	CON	GA	0.000	-0.642
552.000	2.000	493.000	1.000	60.000	2.000	5.000	DOT	AF	0.000	-0.920
554.000	3.000	1328.000	2.000	38.000	1.000	5.000	DOT	RW	2.000	0.559

Table C.1 (continued) - Subject 228

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	3.000	1387.000	2.000	51.000	1.000	1.000	CHO	AF	2.000	0.382
114.000	3.000	1477.000	2.000	27.000	3.000	1.000	CHO	RW	0.000	0.551
121.000	6.000	1784.000	2.000	35.000	6.000	1.000	NOM	MI	0.000	1.125
123.000	4.000	817.000	2.000	31.000	5.000	1.000	NOM	GA	-1.000	-0.685
132.000	6.000	850.000	2.000	22.000	3.000	1.000	ISA	AF	3.000	-0.623
134.000	4.000	1735.000	2.000	24.000	4.000	1.000	ISA	RW	0.000	1.034
141.000	6.000	1622.000	3.000	10.000	6.000	1.000	CON	MI	0.000	0.822
143.000	1.000	1083.000	2.000	59.000	2.000	1.000	CON	GA	-1.000	-0.187
152.000	7.000	1389.000	2.000	4.000	1.000	1.000	DOT	AF	6.000	0.386
154.000	1.000	1823.000	3.000	18.000	1.000	1.000	DOT	RW	0.000	1.198
211.100	2.000	780.000	1.000	39.000	2.000	2.100	CHO	MI	0.000	-0.754
211.200	2.000	781.000	2.000	14.000	2.000	2.200	CHO	MI	0.000	-0.753
213.100	5.000	1375.000	3.000	12.000	5.000	2.100	CHO	GA	0.000	0.360
213.200	3.000	1649.000	2.000	42.000	3.000	2.200	CHO	GA	0.000	0.873
222.100	6.000	845.000	2.000	26.000	6.000	2.100	NOM	AF	0.000	-0.633
222.200	4.000	934.000	1.000	13.000	1.000	2.200	NOM	AF	3.000	-0.466
224.100	5.000	1331.000	2.000	23.000	6.000	2.100	NOM	RW	-1.000	0.277
224.200	6.000	1009.000	2.000	17.000	1.000	2.200	NOM	RW	5.000	-0.326
231.100	3.000	1155.000	1.000	2.000	3.000	2.100	ISA	MI	0.000	-0.052
231.200	2.000	1892.000	2.000	8.000	2.000	2.200	ISA	MI	0.000	1.327
233.100	5.000	666.000	1.000	37.000	5.000	2.100	ISA	GA	0.000	-0.968
233.200	3.000	1186.000	2.000	41.000	3.000	2.200	ISA	GA	0.000	0.006
242.100	3.000	420.000	1.000	58.000	3.000	2.100	CON	AF	0.000	-1.428
242.200	2.000	974.000	2.000	52.000	1.000	2.200	CON	AF	1.000	-0.391
244.100	5.000	603.000	1.000	47.000	5.000	2.100	CON	RW	0.000	-1.086
244.200	4.000	1218.000	2.000	9.000	1.000	2.200	CON	RW	3.000	0.066
251.100	2.000	513.000	1.000	29.000	2.000	2.100	DOT	MI	0.000	-1.254
251.200	2.000	1179.000	1.000	15.000	2.000	2.200	DOT	MI	0.000	-0.007
253.100	5.000	770.000	2.000	11.000	5.000	2.100	DOT	GA	0.000	-0.773
253.200	3.000	841.000	1.000	53.000	3.000	2.200	DOT	GA	0.000	-0.640
312.000	5.000	1319.000	2.000	36.000	3.000	3.000	CHO	AF	2.000	0.255
314.000	1.000	2840.000	2.000	28.000	4.000	3.000	CHO	RW	-3.000	3.102
321.000	2.000	1516.000	2.000	21.000	4.000	3.000	NOM	MI	-2.000	0.624
323.000	2.000	1282.000	2.000	19.000	6.000	3.000	NOM	GA	-4.000	0.185
332.000	5.000	2780.000	3.000	16.000	3.000	3.000	ISA	AF	2.000	2.990
334.000	5.000	1824.000	2.000	30.000	5.000	3.000	ISA	RW	0.000	1.200
341.000	4.000	952.000	1.000	48.000	4.000	3.000	CON	MI	0.000	-0.432
343.000	2.000	1052.000	1.000	7.000	2.000	3.000	CON	GA	0.000	-0.245
352.000	4.000	1151.000	2.000	25.000	4.000	3.000	DOT	AF	0.000	-0.060
354.000	6.000	1443.000	2.000	55.000	6.000	3.000	DOT	RW	0.000	0.487
411.000	2.000	460.000	1.000	56.000	2.000	4.000	CHO	MI	0.000	-1.353
413.000	1.000	494.000	2.000	50.000	1.000	4.000	CHO	GA	0.000	-1.290
422.000	4.000	577.000	2.000	40.000	4.000	4.000	NOM	AF	0.000	-1.134
424.000	4.000	691.000	1.000	43.000	4.000	4.000	NOM	RW	0.000	-0.921
431.000	2.000	639.000	1.000	45.000	2.000	4.000	ISA	MI	0.000	-1.018
433.000	1.000	1056.000	1.000	34.000	1.000	4.000	ISA	GA	0.000	-0.238
442.000	3.000	1350.000	1.000	3.000	3.000	4.000	CON	AF	0.000	0.313
444.000	1.000	1455.000	2.000	32.000	1.000	4.000	CON	RW	0.000	0.509
451.000	2.000	835.000	1.000	5.000	2.000	4.000	DOT	MI	0.000	-0.651
453.000	1.000	514.000	1.000	33.000	1.000	4.000	DOT	GA	0.000	-1.252
512.000	2.000	2318.000	2.000	46.000	2.000	5.000	CHO	AF	0.000	2.125
514.000	2.000	971.000	3.000	54.000	1.000	5.000	CHO	RW	1.000	-0.397
521.000	1.000	924.000	1.000	44.000	1.000	5.000	NOM	MI	0.000	-0.485
523.000	2.000	568.000	1.000	57.000	1.000	5.000	NOM	GA	1.000	-1.151
532.000	2.000	748.000	3.000	20.000	2.000	5.000	ISA	AF	0.000	-0.814
534.000	1.000	2175.000	3.000	6.000	1.000	5.000	ISA	RW	0.000	1.857
541.000	1.000	1236.000	1.000	1.000	1.000	5.000	CON	MI	0.000	0.099
543.000	2.000	1602.000	3.000	49.000	1.000	5.000	CON	GA	1.000	0.785
552.000	2.000	1310.000	2.000	60.000	2.000	5.000	DOT	AF	0.000	0.238
554.000	2.000	807.000	3.000	38.000	1.000	5.000	DOT	RW	1.000	-0.704

Table C.1 (continued) - Subject 229

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	5.000	2504.000	2.000	5.000	1.000	1.000	CHO	AF	4.000	0.689
114.000	2.000	1564.000	3.000	58.000	3.000	1.000	CHO	RW	-1.000	-0.196
121.000	5.000	1615.000	2.000	12.000	6.000	1.000	NOM	MI	-1.000	-0.148
123.000	4.000	991.000	3.000	45.000	5.000	1.000	NOM	GA	-1.000	-0.735
132.000	4.000	1205.000	2.000	41.000	3.000	1.000	ISA	AF	1.000	-0.534
134.000	3.000	1666.000	2.000	26.000	4.000	1.000	ISA	RW	-1.000	-0.100
141.000	6.000	1620.000	2.000	44.000	6.000	1.000	CON	MI	0.000	-0.143
143.000	1.000	2136.000	3.000	6.000	2.000	1.000	CON	GA	-1.000	0.343
152.000	5.000	1507.000	2.000	15.000	1.000	1.000	DOT	AF	4.000	-0.250
154.000	3.000	1906.000	2.000	4.000	1.000	1.000	DOT	RW	2.000	0.126
211.100	2.000	952.000	1.000	17.000	2.000	2.100	CHO	MI	0.000	-0.772
211.200	2.000	950.000	1.000	36.000	2.000	2.200	CHO	MI	0.000	-0.774
213.100	5.000	2230.000	2.000	53.000	5.000	2.100	CHO	GA	0.000	0.431
213.200	3.000	3222.000	2.000	8.000	3.000	2.200	CHO	GA	0.000	1.365
222.100	6.000	2601.000	2.000	10.000	6.000	2.100	NOM	AF	0.000	0.780
222.200	4.000	1066.000	1.000	14.000	1.000	2.200	NOM	AF	3.000	-0.665
224.100	5.000	1563.000	1.000	7.000	6.000	2.100	NOM	RW	-1.000	-0.197
224.200	1.000	1954.000	2.000	59.000	1.000	2.200	NOM	RW	0.000	0.171
231.100	3.000	757.000	1.000	35.000	3.000	2.100	ISA	MI	0.000	-0.955
231.200	4.000	1514.000	1.000	57.000	2.000	2.200	ISA	MI	2.000	-0.243
233.100	5.000	946.000	1.000	25.000	5.000	2.100	ISA	GA	0.000	-0.778
233.200	1.000	836.000	1.000	42.000	3.000	2.200	ISA	GA	-2.000	-0.881
242.100	3.000	1042.000	1.000	13.000	3.000	2.100	CON	AF	0.000	-0.687
242.200	4.000	947.000	1.000	37.000	1.000	2.200	CON	AF	3.000	-0.777
244.100	5.000	619.000	1.000	54.000	5.000	2.100	CON	RW	0.000	-1.085
244.200	6.000	2708.000	2.000	40.000	1.000	2.200	CON	RW	5.000	0.881
251.100	2.000	921.000	1.000	38.000	2.000	2.100	DOT	MI	0.000	-0.801
251.200	2.000	1400.000	1.000	9.000	2.000	2.200	DOT	MI	0.000	-0.350
253.100	5.000	1357.000	2.000	3.000	5.000	2.100	DOT	GA	0.000	-0.391
253.200	8.000	7470.000	3.000	34.000	3.000	2.200	DOT	GA	5.000	5.363
312.000	3.000	1468.000	1.000	22.000	3.000	3.000	CHO	AF	0.000	-0.286
314.000	6.000	1446.000	1.000	56.000	4.000	3.000	CHO	RW	2.000	-0.307
321.000	4.000	2929.000	1.000	21.000	4.000	3.000	NOM	MI	0.000	1.089
323.000	6.000	3015.000	2.000	1.000	6.000	3.000	NOM	GA	0.000	1.170
332.000	3.000	1411.000	1.000	51.000	3.000	3.000	ISA	AF	0.000	-0.340
334.000	5.000	2461.000	1.000	48.000	5.000	3.000	ISA	RW	0.000	0.648
341.000	4.000	1590.000	1.000	47.000	4.000	3.000	CON	MI	0.000	-0.171
343.000	2.000	2277.000	1.000	23.000	2.000	3.000	CON	GA	0.000	0.475
352.000	4.000	1096.000	1.000	29.000	4.000	3.000	DOT	AF	0.000	-0.636
354.000	6.000	2234.000	1.000	60.000	6.000	3.000	DOT	RW	0.000	0.435
411.000	2.000	933.000	1.000	28.000	2.000	4.000	CHO	MI	0.000	-0.790
413.000	1.000	897.000	1.000	18.000	1.000	4.000	CHO	GA	0.000	-0.824
422.000	3.000	2882.000	2.000	2.000	4.000	4.000	NOM	AF	-1.000	1.045
424.000	4.000	1164.000	2.000	43.000	4.000	4.000	NOM	RW	0.000	-0.572
431.000	2.000	894.000	1.000	20.000	2.000	4.000	ISA	MI	0.000	-0.827
433.000	1.000	734.000	1.000	33.000	1.000	4.000	ISA	GA	0.000	-0.977
442.000	3.000	1494.000	1.000	30.000	3.000	4.000	CON	AF	0.000	-0.262
444.000	1.000	1878.000	2.000	31.000	1.000	4.000	CON	RW	0.000	0.100
451.000	2.000	866.000	1.000	16.000	2.000	4.000	DOT	MI	0.000	-0.853
453.000	1.000	826.000	1.000	50.000	1.000	4.000	DOT	GA	0.000	-0.891
512.000	1.000	4177.000	2.000	27.000	2.000	5.000	CHO	AF	-1.000	2.264
514.000	1.000	1804.000	1.000	24.000	1.000	5.000	CHO	RW	0.000	0.030
521.000	2.000	2370.000	1.000	32.000	1.000	5.000	NOM	MI	1.000	0.563
523.000	2.000	2411.000	1.000	55.000	1.000	5.000	NOM	GA	1.000	0.601
532.000	2.000	2516.000	1.000	19.000	2.000	5.000	ISA	AF	0.000	0.700
534.000	2.000	1210.000	1.000	11.000	1.000	5.000	ISA	RW	1.000	-0.529
541.000	1.000	1650.000	1.000	46.000	1.000	5.000	CON	MI	0.000	-0.115
543.000	1.000	1653.000	1.000	52.000	1.000	5.000	CON	GA	0.000	-0.112
552.000	2.000	1354.000	1.000	39.000	2.000	5.000	DOT	AF	0.000	-0.394
554.000	1.000	2918.000	1.000	49.000	1.000	5.000	DOT	RW	0.000	1.079

Table C.1 (continued) - Subject 230

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	8.000	906.000	1.000	5.000	1.000	1.000	CHO	AF	7.000	0.509
121.000	7.000	475.000	2.000	38.000	6.000	1.000	NOM	MI	1.000	-0.811
123.000	4.000	797.000	1.000	29.000	5.000	1.000	NOM	GA	-1.000	0.175
132.000	2.000	794.000	1.000	52.000	3.000	1.000	ISA	AF	-1.000	0.166
141.000	7.000	830.000	1.000	59.000	6.000	1.000	CON	MI	1.000	0.276
143.000	3.000	861.000	1.000	27.000	2.000	1.000	CON	GA	1.000	0.371
152.000	7.000	835.000	1.000	1.000	1.000	1.000	DOT	AF	6.000	0.291
154.000	1.000	1141.000	3.000	18.000	1.000	1.000	DOT	RW	0.000	1.229
211.100	2.000	650.000	1.000	15.000	2.000	2.100	CHO	MI	0.000	-0.275
211.200	2.000	1088.000	2.000	9.000	2.000	2.200	CHO	MI	0.000	1.066
213.100	6.000	958.000	2.000	45.000	5.000	2.100	CHO	GA	1.000	0.668
213.200	4.000	742.000	1.000	51.000	3.000	2.200	CHO	GA	1.000	0.007
222.100	3.000	882.000	1.000	3.000	6.000	2.100	NOM	AF	-3.000	0.435
222.200	4.000	911.000	1.000	33.000	1.000	2.200	NOM	AF	3.000	0.524
224.100	5.000	418.000	2.000	46.000	6.000	2.100	NOM	RW	-1.000	-0.986
224.200	6.000	1362.000	1.000	54.000	1.000	2.200	NOM	RW	5.000	1.905
231.100	3.000	456.000	1.000	16.000	3.000	2.100	ISA	MI	0.000	-0.869
231.200	2.000	909.000	1.000	55.000	2.000	2.200	ISA	MI	0.000	0.518
233.100	5.000	770.000	1.000	19.000	5.000	2.100	ISA	GA	0.000	0.092
233.200	6.000	1468.000	3.000	26.000	3.000	2.200	ISA	GA	3.000	2.230
242.100	3.000	387.000	1.000	43.000	3.000	2.100	CON	AF	0.000	-1.081
242.200	1.000	751.000	1.000	12.000	1.000	2.200	CON	AF	0.000	0.034
251.100	2.000	388.000	1.000	40.000	2.000	2.100	DOT	MI	0.000	-1.078
251.200	1.000	482.000	1.000	39.000	2.000	2.200	DOT	MI	-1.000	-0.790
253.100	5.000	416.000	1.000	57.000	5.000	2.100	DOT	GA	0.000	-0.992
253.200	5.000	654.000	1.000	37.000	3.000	2.200	DOT	GA	2.000	-0.263
312.000	3.000	1145.000	1.000	20.000	3.000	3.000	CHO	AF	0.000	1.241
321.000	4.000	720.000	1.000	31.000	4.000	3.000	NOM	MI	0.000	-0.061
323.000	6.000	795.000	1.000	2.000	6.000	3.000	NOM	GA	0.000	0.169
332.000	3.000	1654.000	2.000	22.000	3.000	3.000	ISA	AF	0.000	2.800
341.000	4.000	449.000	1.000	58.000	4.000	3.000	CON	MI	0.000	-0.891
343.000	2.000	1063.000	1.000	7.000	2.000	3.000	CON	GA	0.000	0.990
352.000	4.000	957.000	4.000	25.000	4.000	3.000	DOT	AF	0.000	0.665
354.000	6.000	979.000	1.000	4.000	6.000	3.000	DOT	RW	0.000	0.732
411.000	2.000	539.000	1.000	8.000	2.000	4.000	CHO	MI	0.000	-0.615
413.000	3.000	346.000	1.000	53.000	1.000	4.000	CHO	GA	2.000	-1.206
422.000	3.000	437.000	1.000	17.000	4.000	4.000	NOM	AF	-1.000	-0.928
424.000	3.000	416.000	1.000	56.000	4.000	4.000	NOM	RW	-1.000	-0.992
431.000	2.000	440.000	1.000	35.000	2.000	4.000	ISA	MI	0.000	-0.918
433.000	1.000	696.000	1.000	11.000	1.000	4.000	ISA	GA	0.000	-0.134
442.000	3.000	481.000	1.000	23.000	3.000	4.000	CON	AF	0.000	-0.793
451.000	2.000	319.000	1.000	34.000	2.000	4.000	DOT	MI	0.000	-1.289
453.000	1.000	423.000	1.000	24.000	1.000	4.000	DOT	GA	0.000	-0.970
512.000	2.000	1413.000	2.000	6.000	2.000	5.000	CHO	AF	0.000	2.062
521.000	3.000	554.000	2.000	32.000	1.000	5.000	NOM	MI	2.000	-0.569
523.000	2.000	804.000	1.000	50.000	1.000	5.000	NOM	GA	1.000	0.196
532.000	2.000	1158.000	1.000	47.000	2.000	5.000	ISA	AF	0.000	1.281
541.000	1.000	379.000	1.000	36.000	1.000	5.000	CON	MI	0.000	-1.105
543.000	1.000	406.000	1.000	28.000	1.000	5.000	CON	GA	0.000	-1.022
552.000	2.000	366.000	1.000	13.000	2.000	5.000	DOT	AF	0.000	-1.145
554.000	2.000	463.000	2.000	44.000	1.000	5.000	DOT	RW	1.000	-0.848

Table C.1 (continued) - Subject 231

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	1.000	1055.000	1.000	45.000	1.000	1.000	CHO	AF	0.000	0.615
121.000	4.000	654.000	2.000	43.000	6.000	1.000	NOM	MI	-2.000	-0.461
123.000	4.000	764.000	2.000	34.000	5.000	1.000	NOM	GA	-1.000	-0.166
132.000	3.000	967.000	2.000	37.000	3.000	1.000	ISA	AF	0.000	0.379
141.000	4.000	961.000	2.000	41.000	6.000	1.000	CON	MI	-2.000	0.363
143.000	2.000	1066.000	2.000	39.000	2.000	1.000	CON	GA	0.000	0.645
152.000	3.000	983.000	2.000	10.000	1.000	1.000	DOT	AF	2.000	0.422
154.000	6.000	1337.000	2.000	52.000	1.000	1.000	DOT	RW	5.000	1.372
211.100	2.000	665.000	1.000	15.000	2.000	2.100	CHO	MI	0.000	-0.432
211.200	2.000	808.000	1.000	30.000	2.000	2.200	CHO	MI	0.000	-0.048
213.100	2.000	965.000	2.000	48.000	5.000	2.100	CHO	GA	-3.000	0.374
213.200	3.000	1352.000	1.000	44.000	3.000	2.200	CHO	GA	0.000	1.412
222.100	4.000	864.000	2.000	24.000	6.000	2.100	NOM	AF	-2.000	0.103
222.200	4.000	818.000	2.000	26.000	1.000	2.200	NOM	AF	3.000	-0.021
224.100	2.000	1040.000	2.000	18.000	6.000	2.100	NOM	RW	-4.000	0.575
224.200	6.000	647.000	1.000	59.000	1.000	2.200	NOM	RW	5.000	-0.480
231.100	3.000	242.000	1.000	57.000	3.000	2.100	ISA	MI	0.000	-1.567
231.200	2.000	425.000	3.000	46.000	2.000	2.200	ISA	MI	0.000	-1.076
233.100	5.000	322.000	2.000	35.000	5.000	2.100	ISA	GA	0.000	-1.352
233.200	3.000	1409.000	1.000	11.000	3.000	2.200	ISA	GA	0.000	1.565
242.100	3.000	572.000	1.000	33.000	3.000	2.100	CON	AF	0.000	-0.681
242.200	1.000	1681.000	1.000	1.000	1.000	2.200	CON	AF	0.000	2.296
251.100	2.000	650.000	1.000	8.000	2.000	2.100	DOT	MI	0.000	-0.472
251.200	2.000	803.000	1.000	12.000	2.000	2.200	DOT	MI	0.000	-0.061
253.100	5.000	724.000	1.000	54.000	5.000	2.100	DOT	GA	0.000	-0.273
253.200	3.000	886.000	2.000	36.000	3.000	2.200	DOT	GA	0.000	0.162
312.000	2.000	1872.000	2.000	6.000	3.000	3.000	CHO	AF	-1.000	2.808
321.000	4.000	1535.000	2.000	47.000	4.000	3.000	NOM	MI	0.000	1.904
323.000	6.000	418.000	1.000	32.000	6.000	3.000	NOM	GA	0.000	-1.095
332.000	3.000	927.000	1.000	60.000	3.000	3.000	ISA	AF	0.000	0.272
341.000	4.000	374.000	1.000	51.000	4.000	3.000	CON	MI	0.000	-1.213
343.000	2.000	408.000	1.000	25.000	2.000	3.000	CON	GA	0.000	-1.122
352.000	4.000	735.000	1.000	22.000	4.000	3.000	DOT	AF	0.000	-0.244
354.000	6.000	828.000	2.000	13.000	6.000	3.000	DOT	RW	0.000	0.006
411.000	2.000	699.000	1.000	49.000	2.000	4.000	CHO	MI	0.000	-0.340
413.000	1.000	409.000	1.000	17.000	1.000	4.000	CHO	GA	0.000	-1.119
422.000	4.000	1298.000	1.000	50.000	4.000	4.000	NOM	AF	0.000	1.268
424.000	2.000	1155.000	3.000	14.000	4.000	4.000	NOM	RW	-2.000	0.884
431.000	2.000	411.000	1.000	16.000	2.000	4.000	ISA	MI	0.000	-1.113
433.000	1.000	1106.000	1.000	4.000	1.000	4.000	ISA	GA	0.000	0.752
442.000	3.000	572.000	2.000	5.000	3.000	4.000	CON	AF	0.000	-0.681
451.000	2.000	269.000	1.000	31.000	2.000	4.000	DOT	MI	0.000	-1.495
453.000	1.000	314.000	1.000	29.000	1.000	4.000	DOT	GA	0.000	-1.374
512.000	1.000	571.000	1.000	2.000	2.000	5.000	CHO	AF	-1.000	-0.684
521.000	1.000	954.000	2.000	38.000	1.000	5.000	NOM	MI	0.000	0.344
523.000	2.000	1238.000	1.000	20.000	1.000	5.000	NOM	GA	1.000	1.106
532.000	2.000	521.000	1.000	40.000	2.000	5.000	ISA	AF	0.000	-0.818
541.000	1.000	952.000	1.000	27.000	1.000	5.000	CON	MI	0.000	0.339
543.000	1.000	554.000	1.000	58.000	1.000	5.000	CON	GA	0.000	-0.730
552.000	2.000	868.000	1.000	42.000	2.000	5.000	DOT	AF	0.000	0.113
554.000	2.000	468.000	1.000	55.000	1.000	5.000	DOT	RW	1.000	-0.960

Table C.1 (continued) - Subject 232

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	2.000	824.000	2.000	53.000	1.000	1.000	CHO	AF	1.000	-0.881
114.000	3.000	2036.000	2.000	38.000	3.000	1.000	CHO	RW	0.000	0.088
121.000	7.000	1422.000	2.000	8.000	6.000	1.000	NOM	MI	1.000	-0.403
123.000	5.000	2106.000	2.000	32.000	5.000	1.000	NOM	GA	0.000	0.144
132.000	3.000	2080.000	2.000	40.000	3.000	1.000	ISA	AF	0.000	0.123
134.000	6.000	3032.000	2.000	22.000	4.000	1.000	ISA	RW	2.000	0.883
141.000	6.000	821.000	2.000	52.000	6.000	1.000	CON	MI	0.000	-0.883
143.000	6.000	3940.000	2.000	12.000	2.000	1.000	CON	GA	4.000	1.609
152.000	2.000	1678.000	2.000	35.000	1.000	1.000	DOT	AF	1.000	-0.198
154.000	5.000	884.000	2.000	46.000	1.000	1.000	DOT	RW	4.000	-0.833
211.100	2.000	613.000	2.000	45.000	2.000	2.100	CHO	MI	0.000	-1.049
211.200	2.000	1223.000	1.000	30.000	2.000	2.200	CHO	MI	0.000	-0.562
213.100	2.000	1496.000	2.000	49.000	5.000	2.100	CHO	GA	-3.000	-0.344
213.200	3.000	2798.000	2.000	15.000	3.000	2.200	CHO	GA	0.000	0.696
222.100	6.000	3241.000	2.000	44.000	6.000	2.100	NOM	AF	0.000	1.050
222.200	4.000	2846.000	1.000	3.000	1.000	2.200	NOM	AF	3.000	0.735
224.100	5.000	1219.000	1.000	34.000	6.000	2.100	NOM	RW	-1.000	-0.565
224.200	6.000	2058.000	2.000	24.000	1.000	2.200	NOM	RW	5.000	0.105
231.100	3.000	652.000	1.000	29.000	3.000	2.100	ISA	MI	0.000	-1.018
231.200	4.000	1691.000	1.000	47.000	2.000	2.200	ISA	MI	2.000	-0.188
233.100	5.000	1440.000	1.000	19.000	5.000	2.100	ISA	GA	0.000	-0.389
233.200	3.000	1679.000	2.000	25.000	3.000	2.200	ISA	GA	0.000	-0.198
242.100	3.000	543.000	1.000	43.000	3.000	2.100	CON	AF	0.000	-1.105
242.200	4.000	1480.000	2.000	50.000	1.000	2.200	CON	AF	3.000	-0.357
244.100	5.000	497.000	1.000	55.000	5.000	2.100	CON	RW	0.000	-1.142
244.200	6.000	1118.000	2.000	60.000	1.000	2.200	CON	RW	5.000	-0.646
251.100	2.000	576.000	1.000	56.000	2.000	2.100	DOT	MI	0.000	-1.079
251.200	2.000	1014.000	1.000	39.000	2.000	2.200	DOT	MI	0.000	-0.729
253.100	5.000	2109.000	3.000	36.000	5.000	2.100	DOT	GA	0.000	0.146
253.200	3.000	6116.000	2.000	2.000	3.000	2.200	DOT	GA	0.000	3.348
312.000	3.000	1250.000	2.000	58.000	3.000	3.000	CHO	AF	0.000	-0.540
314.000	6.000	5289.000	1.000	1.000	4.000	3.000	CHO	RW	2.000	2.687
321.000	2.000	3560.000	2.000	26.000	4.000	3.000	NOM	MI	-2.000	1.305
323.000	6.000	1571.000	1.000	28.000	6.000	3.000	NOM	GA	0.000	-0.284
332.000	3.000	5175.000	1.000	5.000	3.000	3.000	ISA	AF	0.000	2.596
334.000	5.000	1195.000	2.000	59.000	5.000	3.000	ISA	RW	0.000	-0.584
341.000	4.000	1999.000	1.000	23.000	4.000	3.000	CON	MI	0.000	0.058
343.000	2.000	1631.000	2.000	31.000	2.000	3.000	CON	GA	0.000	-0.236
352.000	4.000	1729.000	1.000	37.000	4.000	3.000	DOT	AF	0.000	-0.158
354.000	6.000	1454.000	2.000	27.000	6.000	3.000	DOT	RW	0.000	-0.377
411.000	2.000	1372.000	1.000	10.000	2.000	4.000	CHO	MI	0.000	-0.443
413.000	1.000	1232.000	1.000	18.000	1.000	4.000	CHO	GA	0.000	-0.555
422.000	4.000	2031.000	2.000	21.000	4.000	4.000	NOM	AF	0.000	0.084
424.000	2.000	1968.000	1.000	7.000	4.000	4.000	NOM	RW	-2.000	0.033
431.000	2.000	665.000	1.000	54.000	2.000	4.000	ISA	MI	0.000	-1.008
433.000	1.000	1155.000	1.000	17.000	1.000	4.000	ISA	GA	0.000	-0.616
442.000	3.000	682.000	1.000	16.000	3.000	4.000	CON	AF	0.000	-0.994
444.000	1.000	1854.000	1.000	4.000	1.000	4.000	CON	RW	0.000	-0.058
451.000	2.000	348.000	1.000	51.000	2.000	4.000	DOT	MI	0.000	-1.261
453.000	1.000	402.000	1.000	57.000	1.000	4.000	DOT	GA	0.000	-1.218
512.000	1.000	4288.000	2.000	14.000	2.000	5.000	CHO	AF	-1.000	1.887
514.000	2.000	2482.000	2.000	9.000	1.000	5.000	CHO	RW	1.000	0.444
521.000	1.000	3886.000	1.000	6.000	1.000	5.000	NOM	MI	0.000	1.566
523.000	2.000	3721.000	3.000	42.000	1.000	5.000	NOM	GA	1.000	1.434
532.000	2.000	2498.000	1.000	11.000	2.000	5.000	ISA	AF	0.000	0.457
534.000	2.000	2380.000	1.000	13.000	1.000	5.000	ISA	RW	1.000	0.363
541.000	1.000	1601.000	3.000	41.000	1.000	5.000	CON	MI	0.000	-0.260
543.000	1.000	1010.000	2.000	48.000	1.000	5.000	CON	GA	0.000	-0.732
552.000	2.000	1680.000	2.000	33.000	2.000	5.000	DOT	AF	0.000	-0.197
554.000	2.000	2239.000	2.000	20.000	1.000	5.000	DOT	RW	1.000	0.250

Table C.1 (continued) - Subject 233

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	2.000	1925.000	2.000	28.000	1.000	1.000	CHO	AF	1.000	1.288
114.000	4.000	2408.000	3.000	24.000	3.000	1.000	CHO	RW	1.000	2.062
121.000	6.000	711.000	2.000	7.000	6.000	1.000	NOM	MI	0.000	-0.656
123.000	5.000	1122.000	2.000	18.000	5.000	1.000	NOM	GA	0.000	0.002
132.000	5.000	809.000	2.000	60.000	3.000	1.000	ISA	AF	2.000	-0.499
134.000	3.000	1303.000	3.000	21.000	4.000	1.000	ISA	RW	-1.000	0.292
141.000	6.000	1747.000	2.000	2.000	6.000	1.000	CON	MI	0.000	1.003
143.000	3.000	1900.000	2.000	40.000	2.000	1.000	CON	GA	1.000	1.248
152.000	4.000	1524.000	3.000	49.000	1.000	1.000	DOT	AF	3.000	0.646
154.000	3.000	3282.000	4.000	36.000	1.000	1.000	DOT	RW	2.000	3.461
211.100	2.000	314.000	2.000	57.000	2.000	2.100	CHO	MI	0.000	-1.291
211.200	7.000	571.000	3.000	43.000	2.000	2.200	CHO	MI	5.000	-0.880
213.100	2.000	797.000	3.000	26.000	5.000	2.100	CHO	GA	-3.000	-0.518
213.200	3.000	1256.000	2.000	50.000	3.000	2.200	CHO	GA	0.000	0.217
222.100	1.000	1584.000	3.000	35.000	6.000	2.100	NOM	AF	-5.000	0.742
222.200	1.000	1326.000	2.000	37.000	1.000	2.200	NOM	AF	0.000	0.329
224.100	6.000	1159.000	1.000	52.000	6.000	2.100	NOM	RW	0.000	0.062
224.200	6.000	1421.000	3.000	47.000	1.000	2.200	NOM	RW	5.000	0.481
231.100	3.000	280.000	1.000	38.000	3.000	2.100	ISA	MI	0.000	-1.346
231.200	7.000	1623.000	2.000	6.000	2.000	2.200	ISA	MI	5.000	0.805
233.100	5.000	1512.000	1.000	8.000	5.000	2.100	ISA	GA	0.000	0.627
233.200	1.000	1570.000	2.000	33.000	3.000	2.200	ISA	GA	-2.000	0.720
242.100	3.000	321.000	1.000	39.000	3.000	2.100	CON	AF	0.000	-1.280
242.200	1.000	517.000	1.000	45.000	1.000	2.200	CON	AF	0.000	-0.966
244.100	5.000	381.000	1.000	12.000	5.000	2.100	CON	RW	0.000	-1.184
244.200	6.000	1915.000	2.000	10.000	1.000	2.200	CON	RW	5.000	1.272
251.100	2.000	811.000	2.000	11.000	2.000	2.100	DOT	MI	0.000	-0.496
251.200	1.000	1370.000	3.000	44.000	2.000	2.200	DOT	MI	-1.000	0.400
253.100	5.000	1266.000	3.000	51.000	5.000	2.100	DOT	GA	0.000	0.233
253.200	4.000	1510.000	1.000	15.000	3.000	2.200	DOT	GA	1.000	0.624
312.000	5.000	1391.000	2.000	29.000	3.000	3.000	CHO	AF	2.000	0.433
314.000	4.000	691.000	2.000	46.000	4.000	3.000	CHO	RW	0.000	-0.688
321.000	4.000	1325.000	2.000	13.000	4.000	3.000	NOM	MI	0.000	0.328
323.000	2.000	890.000	2.000	48.000	6.000	3.000	NOM	GA	-4.000	-0.369
332.000	3.000	2759.000	2.000	3.000	3.000	3.000	ISA	AF	0.000	2.624
334.000	4.000	633.000	2.000	56.000	5.000	3.000	ISA	RW	-1.000	-0.781
341.000	3.000	1808.000	1.000	22.000	4.000	3.000	CON	MI	-1.000	1.101
343.000	5.000	1335.000	1.000	5.000	2.000	3.000	CON	GA	3.000	0.344
352.000	4.000	723.000	3.000	41.000	4.000	3.000	DOT	AF	0.000	-0.636
354.000	3.000	1334.000	2.000	30.000	6.000	3.000	DOT	RW	-3.000	0.342
411.000	2.000	661.000	1.000	19.000	2.000	4.000	CHO	MI	0.000	-0.736
413.000	1.000	858.000	2.000	34.000	1.000	4.000	CHO	GA	0.000	-0.420
422.000	4.000	1468.000	1.000	9.000	4.000	4.000	NOM	AF	0.000	0.556
424.000	4.000	387.000	2.000	32.000	4.000	4.000	NOM	RW	0.000	-1.174
431.000	2.000	307.000	1.000	14.000	2.000	4.000	ISA	MI	0.000	-1.303
433.000	1.000	501.000	1.000	23.000	1.000	4.000	ISA	GA	0.000	-0.992
442.000	3.000	643.000	1.000	17.000	3.000	4.000	CON	AF	0.000	-0.765
444.000	1.000	426.000	3.000	31.000	1.000	4.000	CON	RW	0.000	-1.112
451.000	2.000	406.000	1.000	16.000	2.000	4.000	DOT	MI	0.000	-1.144
453.000	1.000	424.000	1.000	55.000	1.000	4.000	DOT	GA	0.000	-1.115
512.000	2.000	1708.000	3.000	4.000	2.000	5.000	CHO	AF	0.000	0.941
514.000	1.000	895.000	2.000	27.000	1.000	5.000	CHO	RW	0.000	-0.361
521.000	1.000	694.000	2.000	42.000	1.000	5.000	NOM	MI	0.000	-0.683
523.000	1.000	729.000	3.000	1.000	1.000	5.000	NOM	GA	0.000	-0.627
532.000	2.000	1609.000	2.000	20.000	2.000	5.000	ISA	AF	0.000	0.782
534.000	2.000	685.000	3.000	54.000	1.000	5.000	ISA	RW	1.000	-0.697
541.000	1.000	971.000	2.000	53.000	1.000	5.000	CON	MI	0.000	-0.239
543.000	1.000	1347.000	4.000	58.000	1.000	5.000	CON	GA	0.000	0.363
552.000	2.000	823.000	2.000	25.000	2.000	5.000	DOT	AF	0.000	-0.476
554.000	2.000	562.000	3.000	59.000	1.000	5.000	DOT	RW	1.000	-0.894

Table C.1 (continued) - Subject 234

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	2.000	2412.000	2.000	13.000	1.000	1.000	CHO	AF	1.000	0.791
114.000	2.000	867.000	2.000	37.000	3.000	1.000	CHO	RW	-1.000	-0.775
121.000	5.000	1033.000	2.000	57.000	6.000	1.000	NOM	MI	-1.000	-0.607
123.000	4.000	692.000	2.000	46.000	5.000	1.000	NOM	GA	-1.000	-0.952
132.000	2.000	3016.000	2.000	11.000	3.000	1.000	ISA	AF	-1.000	1.403
134.000	5.000	3111.000	2.000	3.000	4.000	1.000	ISA	RW	1.000	1.499
141.000	6.000	3661.000	2.000	6.000	6.000	1.000	CON	MI	0.000	2.056
143.000	6.000	1121.000	2.000	41.000	2.000	1.000	CON	GA	4.000	-0.517
152.000	4.000	4291.000	3.000	30.000	1.000	1.000	DOT	AF	3.000	2.694
154.000	3.000	4479.000	3.000	20.000	1.000	1.000	DOT	RW	2.000	2.885
211.100	2.000	595.000	1.000	43.000	2.000	2.100	CHO	MI	0.000	-1.050
211.200	2.000	946.000	1.000	50.000	2.000	2.200	CHO	MI	0.000	-0.695
213.100	5.000	741.000	1.000	44.000	5.000	2.100	CHO	GA	0.000	-0.902
213.200	3.000	1249.000	1.000	25.000	3.000	2.200	CHO	GA	0.000	-0.388
222.100	6.000	1389.000	1.000	32.000	6.000	2.100	NOM	AF	0.000	-0.246
222.200	4.000	1484.000	2.000	53.000	1.000	2.200	NOM	AF	3.000	-0.150
224.100	5.000	1260.000	2.000	56.000	6.000	2.100	NOM	RW	-1.000	-0.377
224.200	6.000	2280.000	2.000	2.000	1.000	2.200	NOM	RW	5.000	0.657
231.100	3.000	628.000	1.000	48.000	3.000	2.100	ISA	MI	0.000	-1.017
231.200	4.000	1497.000	1.000	18.000	2.000	2.200	ISA	MI	2.000	-0.136
233.100	5.000	979.000	1.000	40.000	5.000	2.100	ISA	GA	0.000	-0.661
233.200	3.000	1215.000	1.000	36.000	3.000	2.200	ISA	GA	0.000	-0.422
242.100	3.000	610.000	1.000	29.000	3.000	2.100	CON	AF	0.000	-1.035
242.200	4.000	2878.000	1.000	26.000	1.000	2.200	CON	AF	3.000	1.263
244.100	5.000	1017.000	1.000	12.000	5.000	2.100	CON	RW	0.000	-0.623
244.200	6.000	1380.000	2.000	45.000	1.000	2.200	CON	RW	5.000	-0.255
251.100	2.000	1038.000	1.000	39.000	2.000	2.100	DOT	MI	0.000	-0.601
251.200	2.000	1623.000	1.000	16.000	2.000	2.200	DOT	MI	0.000	-0.009
253.100	5.000	1330.000	2.000	33.000	5.000	2.100	DOT	GA	0.000	-0.306
253.200	3.000	2735.000	1.000	21.000	3.000	2.200	DOT	GA	0.000	1.118
312.000	3.000	2253.000	1.000	15.000	3.000	3.000	CHO	AF	0.000	0.630
314.000	4.000	2226.000	1.000	42.000	4.000	3.000	CHO	RW	0.000	0.602
321.000	4.000	2855.000	1.000	8.000	4.000	3.000	NOM	MI	0.000	1.239
323.000	6.000	1008.000	1.000	22.000	6.000	3.000	NOM	GA	0.000	-0.632
332.000	3.000	1878.000	1.000	54.000	3.000	3.000	ISA	AF	0.000	0.250
334.000	5.000	1991.000	1.000	58.000	5.000	3.000	ISA	RW	0.000	0.364
341.000	4.000	2225.000	1.000	5.000	4.000	3.000	CON	MI	0.000	0.601
343.000	2.000	1292.000	1.000	7.000	2.000	3.000	CON	GA	0.000	-0.344
352.000	4.000	1907.000	1.000	49.000	4.000	3.000	DOT	AF	0.000	0.279
354.000	6.000	1416.000	1.000	51.000	6.000	3.000	DOT	RW	0.000	-0.218
411.000	2.000	951.000	1.000	24.000	2.000	4.000	CHO	MI	0.000	-0.690
413.000	1.000	1063.000	1.000	34.000	1.000	4.000	CHO	GA	0.000	-0.576
422.000	4.000	1600.000	2.000	23.000	4.000	4.000	NOM	AF	0.000	-0.032
424.000	4.000	1432.000	1.000	4.000	4.000	4.000	NOM	RW	0.000	-0.202
431.000	2.000	619.000	1.000	19.000	2.000	4.000	ISA	MI	0.000	-1.026
433.000	1.000	388.000	1.000	60.000	1.000	4.000	ISA	GA	0.000	-1.260
442.000	3.000	868.000	1.000	55.000	3.000	4.000	CON	AF	0.000	-0.774
444.000	1.000	678.000	1.000	31.000	1.000	4.000	CON	RW	0.000	-0.966
451.000	2.000	547.000	1.000	47.000	2.000	4.000	DOT	MI	0.000	-1.099
453.000	1.000	714.000	1.000	10.000	1.000	4.000	DOT	GA	0.000	-0.930
512.000	2.000	1728.000	1.000	1.000	2.000	5.000	CHO	AF	0.000	0.098
514.000	1.000	2357.000	1.000	38.000	1.000	5.000	CHO	RW	0.000	0.735
521.000	1.000	1715.000	1.000	35.000	1.000	5.000	NOM	MI	0.000	0.084
523.000	2.000	4709.000	2.000	27.000	1.000	5.000	NOM	GA	1.000	3.118
532.000	2.000	793.000	1.000	14.000	2.000	5.000	ISA	AF	0.000	-0.850
534.000	1.000	1321.000	1.000	17.000	1.000	5.000	ISA	RW	0.000	-0.315
541.000	1.000	1099.000	1.000	9.000	1.000	5.000	CON	MI	0.000	-0.540
543.000	1.000	1167.000	1.000	52.000	1.000	5.000	CON	GA	0.000	-0.471
552.000	2.000	1406.000	1.000	28.000	2.000	5.000	DOT	AF	0.000	-0.229
554.000	2.000	2135.000	1.000	59.000	1.000	5.000	DOT	RW	1.000	0.510

Table C.1 (continued) - Subject 235

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	8.000	1441.000	1.000	6.000	1.000	1.000	CHO	AF	7.000	1.792
114.000	5.000	608.000	2.000	28.000	3.000	1.000	CHO	RW	2.000	-0.321
121.000	5.000	554.000	1.000	49.000	6.000	1.000	NOM	MI	-1.000	-0.458
123.000	1.000	372.000	1.000	39.000	5.000	1.000	NOM	GA	-4.000	-0.919
132.000	3.000	872.000	1.000	14.000	3.000	1.000	ISA	AF	0.000	0.349
134.000	6.000	674.000	1.000	51.000	4.000	1.000	ISA	RW	2.000	-0.153
141.000	2.000	786.000	1.000	27.000	6.000	1.000	CON	MI	-4.000	0.131
143.000	8.000	1051.000	2.000	1.000	2.000	1.000	CON	GA	6.000	0.803
152.000	7.000	820.000	1.000	50.000	1.000	1.000	DOT	AF	6.000	0.217
154.000	2.000	1094.000	2.000	3.000	1.000	1.000	DOT	RW	1.000	0.912
211.100	2.000	383.000	1.000	17.000	2.000	2.100	CHO	MI	0.000	-0.891
211.200	2.000	389.000	1.000	56.000	2.000	2.200	CHO	MI	0.000	-0.876
213.100	6.000	855.000	1.000	36.000	5.000	2.100	CHO	GA	1.000	0.306
213.200	8.000	1662.000	1.000	5.000	3.000	2.200	CHO	GA	5.000	2.353
222.100	1.000	757.000	1.000	41.000	6.000	2.100	NOM	AF	-5.000	0.057
222.200	3.000	557.000	4.000	19.000	1.000	2.200	NOM	AF	2.000	-0.450
224.100	5.000	503.000	1.000	47.000	6.000	2.100	NOM	RW	-1.000	-0.587
224.200	6.000	637.000	1.000	43.000	1.000	2.200	NOM	RW	5.000	-0.247
231.100	3.000	324.000	1.000	24.000	3.000	2.100	ISA	MI	0.000	-1.041
231.200	2.000	649.000	1.000	13.000	2.000	2.200	ISA	MI	0.000	-0.217
233.100	5.000	607.000	1.000	25.000	5.000	2.100	ISA	GA	0.000	-0.323
233.200	8.000	1151.000	1.000	35.000	3.000	2.200	ISA	GA	5.000	1.057
242.100	3.000	418.000	1.000	44.000	3.000	2.100	CON	AF	0.000	-0.803
242.200	6.000	1071.000	1.000	12.000	1.000	2.200	CON	AF	5.000	0.854
244.100	5.000	1216.000	1.000	16.000	5.000	2.100	CON	RW	0.000	1.222
244.200	6.000	1027.000	1.000	29.000	1.000	2.200	CON	RW	5.000	0.742
251.100	2.000	305.000	1.000	38.000	2.000	2.100	DOT	MI	0.000	-1.089
251.200	2.000	845.000	1.000	37.000	2.000	2.200	DOT	MI	0.000	0.281
253.100	2.000	430.000	1.000	20.000	5.000	2.100	DOT	GA	-3.000	-0.772
253.200	3.000	1407.000	1.000	45.000	3.000	2.200	DOT	GA	0.000	1.706
312.000	3.000	908.000	1.000	21.000	3.000	3.000	CHO	AF	0.000	0.440
314.000	1.000	626.000	1.000	54.000	4.000	3.000	CHO	RW	-3.000	-0.275
321.000	4.000	345.000	1.000	31.000	4.000	3.000	NOM	MI	0.000	-0.988
323.000	6.000	612.000	1.000	57.000	6.000	3.000	NOM	GA	0.000	-0.311
332.000	1.000	1180.000	4.000	11.000	3.000	3.000	ISA	AF	-2.000	1.130
334.000	5.000	2430.000	4.000	10.000	5.000	3.000	ISA	RW	0.000	4.301
341.000	4.000	606.000	1.000	26.000	4.000	3.000	CON	MI	0.000	-0.326
343.000	2.000	1601.000	2.000	15.000	2.000	3.000	CON	GA	0.000	2.198
352.000	4.000	696.000	2.000	59.000	4.000	3.000	DOT	AF	0.000	-0.097
354.000	3.000	639.000	1.000	40.000	6.000	3.000	DOT	RW	-3.000	-0.242
411.000	2.000	636.000	1.000	8.000	2.000	4.000	CHO	MI	0.000	-0.250
413.000	1.000	365.000	1.000	60.000	1.000	4.000	CHO	GA	0.000	-0.937
422.000	3.000	510.000	2.000	58.000	4.000	4.000	NOM	AF	-1.000	-0.569
424.000	4.000	586.000	1.000	2.000	4.000	4.000	NOM	RW	0.000	-0.376
431.000	2.000	334.000	1.000	46.000	2.000	4.000	ISA	MI	0.000	-1.016
433.000	1.000	408.000	1.000	23.000	1.000	4.000	ISA	GA	0.000	-0.828
442.000	3.000	1128.000	1.000	7.000	3.000	4.000	CON	AF	0.000	0.998
444.000	1.000	376.000	1.000	53.000	1.000	4.000	CON	RW	0.000	-0.909
451.000	2.000	457.000	1.000	30.000	2.000	4.000	DOT	MI	0.000	-0.704
453.000	1.000	637.000	1.000	55.000	1.000	4.000	DOT	GA	0.000	-0.247
512.000	1.000	581.000	1.000	33.000	2.000	5.000	CHO	AF	-1.000	-0.389
514.000	3.000	389.000	1.000	22.000	1.000	5.000	CHO	RW	2.000	-0.876
521.000	3.000	532.000	1.000	42.000	1.000	5.000	NOM	MI	2.000	-0.513
523.000	2.000	599.000	1.000	18.000	1.000	5.000	NOM	GA	1.000	-0.344
532.000	2.000	378.000	1.000	52.000	2.000	5.000	ISA	AF	0.000	-0.904
534.000	2.000	753.000	1.000	9.000	1.000	5.000	ISA	RW	1.000	0.047
541.000	3.000	667.000	1.000	34.000	1.000	5.000	CON	MI	2.000	-0.171
543.000	1.000	457.000	1.000	4.000	1.000	5.000	CON	GA	0.000	-0.704
552.000	2.000	539.000	1.000	48.000	2.000	5.000	DOT	AF	0.000	-0.496
554.000	3.000	625.000	1.000	32.000	1.000	5.000	DOT	RW	2.000	-0.278

Table C.1 (continued) - Subject 236

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	2.000	751.000	2.000	28.000	1.000	1.000	CHO	AF	1.000	-0.665
114.000	5.000	2464.000	3.000	15.000	3.000	1.000	CHO	RW	2.000	1.346
121.000	5.000	1256.000	3.000	46.000	6.000	1.000	NOM	MI	-1.000	-0.072
123.000	4.000	665.000	2.000	18.000	5.000	1.000	NOM	GA	-1.000	-0.766
132.000	4.000	1614.000	2.000	2.000	3.000	1.000	ISA	AF	1.000	0.348
134.000	4.000	995.000	2.000	13.000	4.000	1.000	ISA	RW	0.000	-0.378
141.000	5.000	799.000	2.000	11.000	6.000	1.000	CON	MI	-1.000	-0.608
143.000	2.000	1869.000	3.000	59.000	2.000	1.000	CON	GA	0.000	0.648
152.000	2.000	789.000	2.000	50.000	1.000	1.000	DOT	AF	1.000	-0.620
154.000	2.000	4806.000	3.000	38.000	1.000	1.000	DOT	RW	1.000	4.095
211.100	2.000	1118.000	1.000	14.000	2.000	2.100	CHO	MI	0.000	-0.234
211.200	2.000	1639.000	2.000	58.000	2.000	2.200	CHO	MI	0.000	0.378
213.100	5.000	763.000	2.000	45.000	5.000	2.100	CHO	GA	0.000	-0.651
213.200	3.000	1773.000	2.000	35.000	3.000	2.200	CHO	GA	0.000	0.535
222.100	1.000	438.000	2.000	60.000	6.000	2.100	NOM	AF	-5.000	-1.032
222.200	4.000	1728.000	2.000	24.000	1.000	2.200	NOM	AF	3.000	0.482
224.100	5.000	826.000	2.000	20.000	6.000	2.100	NOM	RW	-1.000	-0.577
224.200	6.000	2409.000	3.000	41.000	1.000	2.200	NOM	RW	5.000	1.281
231.100	3.000	353.000	1.000	17.000	3.000	2.100	ISA	MI	0.000	-1.132
231.200	4.000	1446.000	2.000	31.000	2.000	2.200	ISA	MI	2.000	0.151
233.100	5.000	1527.000	2.000	48.000	5.000	2.100	ISA	GA	0.000	0.246
233.200	3.000	2185.000	1.000	12.000	3.000	2.200	ISA	GA	0.000	1.019
242.100	3.000	770.000	1.000	37.000	3.000	2.100	CON	AF	0.000	-0.642
242.200	4.000	1001.000	3.000	30.000	1.000	2.200	CON	AF	3.000	-0.371
244.100	5.000	810.000	2.000	52.000	5.000	2.100	CON	RW	0.000	-0.595
244.200	6.000	2856.000	4.000	23.000	1.000	2.200	CON	RW	5.000	1.806
251.100	2.000	675.000	2.000	39.000	2.000	2.100	DOT	MI	0.000	-0.754
251.200	4.000	761.000	3.000	36.000	2.000	2.200	DOT	MI	2.000	-0.653
253.100	5.000	540.000	2.000	47.000	5.000	2.100	DOT	GA	0.000	-0.912
253.200	3.000	3248.000	3.000	54.000	3.000	2.200	DOT	GA	0.000	2.266
312.000	3.000	1891.000	2.000	10.000	3.000	3.000	CHO	AF	0.000	0.673
314.000	6.000	3666.000	3.000	44.000	4.000	3.000	CHO	RW	2.000	2.757
321.000	2.000	2124.000	3.000	29.000	4.000	3.000	NOM	MI	-2.000	0.947
323.000	6.000	919.000	2.000	43.000	6.000	3.000	NOM	GA	0.000	-0.467
332.000	3.000	1395.000	2.000	7.000	3.000	3.000	ISA	AF	0.000	0.091
334.000	5.000	801.000	2.000	57.000	5.000	3.000	ISA	RW	0.000	-0.606
341.000	4.000	1236.000	2.000	22.000	4.000	3.000	CON	MI	0.000	-0.095
343.000	2.000	820.000	2.000	21.000	2.000	3.000	CON	GA	0.000	-0.584
352.000	4.000	2412.000	2.000	6.000	4.000	3.000	DOT	AF	0.000	1.285
354.000	6.000	902.000	2.000	53.000	6.000	3.000	DOT	RW	0.000	-0.487
411.000	2.000	486.000	2.000	33.000	2.000	4.000	CHO	MI	0.000	-0.976
413.000	1.000	1515.000	2.000	3.000	1.000	4.000	CHO	GA	0.000	0.232
422.000	4.000	997.000	2.000	34.000	4.000	4.000	NOM	AF	0.000	-0.376
424.000	4.000	1086.000	2.000	55.000	4.000	4.000	NOM	RW	0.000	-0.271
431.000	2.000	632.000	1.000	27.000	2.000	4.000	ISA	MI	0.000	-0.804
433.000	1.000	597.000	2.000	40.000	1.000	4.000	ISA	GA	0.000	-0.845
442.000	3.000	816.000	1.000	9.000	3.000	4.000	CON	AF	0.000	-0.588
444.000	1.000	631.000	1.000	19.000	1.000	4.000	CON	RW	0.000	-0.805
451.000	2.000	1635.000	1.000	25.000	2.000	4.000	DOT	MI	0.000	0.373
453.000	1.000	423.000	1.000	26.000	1.000	4.000	DOT	GA	0.000	-1.050
512.000	2.000	2015.000	2.000	8.000	2.000	5.000	CHO	AF	0.000	0.819
514.000	2.000	1492.000	2.000	1.000	1.000	5.000	CHO	RW	1.000	0.205
521.000	1.000	1572.000	3.000	32.000	1.000	5.000	NOM	MI	0.000	0.299
523.000	2.000	593.000	2.000	42.000	1.000	5.000	NOM	GA	1.000	-0.850
532.000	2.000	950.000	2.000	51.000	2.000	5.000	ISA	AF	0.000	-0.431
534.000	2.000	1044.000	3.000	56.000	1.000	5.000	ISA	RW	1.000	-0.321
541.000	1.000	582.000	2.000	16.000	1.000	5.000	CON	MI	0.000	-0.863
543.000	1.000	756.000	1.000	4.000	1.000	5.000	CON	GA	0.000	-0.659
552.000	2.000	659.000	1.000	5.000	2.000	5.000	DOT	AF	0.000	-0.773
554.000	2.000	1513.000	2.000	49.000	1.000	5.000	DOT	RW	1.000	0.230

Table C.1 (continued) - Subject 237

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	3.000	1870.000	3.000	38.000	1.000	1.000	CHO	AF	2.000	1.336
114.000	3.000	1502.000	3.000	14.000	3.000	1.000	CHO	RW	0.000	0.716
121.000	5.000	756.000	2.000	13.000	6.000	1.000	NOM	MI	-1.000	-0.541
123.000	5.000	2117.000	3.000	19.000	5.000	1.000	NOM	GA	0.000	1.753
132.000	5.000	1235.000	4.000	44.000	3.000	1.000	ISA	AF	2.000	0.266
134.000	4.000	3179.000	3.000	17.000	4.000	1.000	ISA	RW	0.000	3.543
141.000	5.000	854.000	2.000	37.000	6.000	1.000	CON	MI	-1.000	-0.376
143.000	2.000	1576.000	4.000	28.000	2.000	1.000	CON	GA	0.000	0.841
152.000	3.000	1632.000	3.000	43.000	1.000	1.000	DOT	AF	2.000	0.935
154.000	2.000	1440.000	4.000	50.000	1.000	1.000	DOT	RW	1.000	0.611
211.100	2.000	387.000	1.000	40.000	2.000	2.100	CHO	MI	0.000	-1.163
211.200	2.000	370.000	1.000	49.000	2.000	2.200	CHO	MI	0.000	-1.192
213.100	6.000	1524.000	3.000	22.000	5.000	2.100	CHO	GA	1.000	0.753
213.200	3.000	1238.000	2.000	8.000	3.000	2.200	CHO	GA	0.000	0.271
222.100	6.000	627.000	1.000	24.000	6.000	2.100	NOM	AF	0.000	-0.759
222.200	4.000	1255.000	2.000	11.000	1.000	2.200	NOM	AF	3.000	0.300
224.100	6.000	710.000	1.000	59.000	6.000	2.100	NOM	RW	0.000	-0.619
224.200	6.000	1451.000	2.000	16.000	1.000	2.200	NOM	RW	5.000	0.630
231.100	3.000	310.000	1.000	48.000	3.000	2.100	ISA	MI	0.000	-1.293
231.200	2.000	627.000	1.000	3.000	2.000	2.200	ISA	MI	0.000	-0.759
233.100	5.000	568.000	2.000	35.000	5.000	2.100	ISA	GA	0.000	-0.858
233.200	3.000	696.000	2.000	54.000	3.000	2.200	ISA	GA	0.000	-0.643
242.100	3.000	840.000	1.000	4.000	3.000	2.100	CON	AF	0.000	-0.400
242.200	4.000	703.000	1.000	26.000	1.000	2.200	CON	AF	3.000	-0.631
244.100	5.000	411.000	1.000	58.000	5.000	2.100	CON	RW	0.000	-1.123
244.200	6.000	1492.000	2.000	47.000	1.000	2.200	CON	RW	5.000	0.699
251.100	2.000	390.000	1.000	56.000	2.000	2.100	DOT	MI	0.000	-1.158
251.200	2.000	528.000	1.000	23.000	2.000	2.200	DOT	MI	0.000	-0.926
253.100	5.000	755.000	3.000	42.000	5.000	2.100	DOT	GA	0.000	-0.543
253.200	3.000	1313.000	3.000	2.000	3.000	2.200	DOT	GA	0.000	0.397
312.000	3.000	1520.000	3.000	46.000	3.000	3.000	CHO	AF	0.000	0.746
314.000	1.000	1187.000	2.000	7.000	4.000	3.000	CHO	RW	-3.000	0.185
321.000	2.000	793.000	1.000	57.000	4.000	3.000	NOM	MI	-2.000	-0.479
323.000	2.000	1262.000	2.000	21.000	6.000	3.000	NOM	GA	-4.000	0.311
332.000	3.000	2431.000	4.000	5.000	3.000	3.000	ISA	AF	0.000	2.282
334.000	2.000	2111.000	4.000	53.000	5.000	3.000	ISA	RW	-3.000	1.742
341.000	1.000	1477.000	2.000	31.000	4.000	3.000	CON	MI	-3.000	0.674
343.000	2.000	1763.000	3.000	15.000	2.000	3.000	CON	GA	0.000	1.156
352.000	4.000	1258.000	2.000	30.000	4.000	3.000	DOT	AF	0.000	0.305
354.000	6.000	865.000	2.000	6.000	6.000	3.000	DOT	RW	0.000	-0.358
411.000	2.000	613.000	1.000	39.000	2.000	4.000	CHO	MI	0.000	-0.782
413.000	1.000	545.000	1.000	27.000	1.000	4.000	CHO	GA	0.000	-0.897
422.000	4.000	575.000	1.000	34.000	4.000	4.000	NOM	AF	0.000	-0.847
424.000	4.000	1008.000	2.000	1.000	4.000	4.000	NOM	RW	0.000	-0.117
431.000	2.000	364.000	1.000	52.000	2.000	4.000	ISA	MI	0.000	-1.202
433.000	1.000	488.000	1.000	25.000	1.000	4.000	ISA	GA	0.000	-0.993
442.000	3.000	598.000	1.000	18.000	3.000	4.000	CON	AF	0.000	-0.808
444.000	1.000	656.000	2.000	55.000	1.000	4.000	CON	RW	0.000	-0.710
451.000	2.000	489.000	1.000	12.000	2.000	4.000	DOT	MI	0.000	-0.991
453.000	1.000	271.000	1.000	60.000	1.000	4.000	DOT	GA	0.000	-1.359
512.000	1.000	2135.000	3.000	20.000	2.000	5.000	CHO	AF	-1.000	1.783
514.000	2.000	867.000	3.000	51.000	1.000	5.000	CHO	RW	1.000	-0.354
521.000	1.000	1239.000	1.000	33.000	1.000	5.000	NOM	MI	0.000	0.273
523.000	2.000	1647.000	3.000	41.000	1.000	5.000	NOM	GA	1.000	0.960
532.000	2.000	711.000	2.000	45.000	2.000	5.000	ISA	AF	0.000	-0.617
534.000	2.000	978.000	2.000	29.000	1.000	5.000	ISA	RW	1.000	-0.167
541.000	1.000	1048.000	1.000	10.000	1.000	5.000	CON	MI	0.000	-0.049
543.000	1.000	727.000	2.000	36.000	1.000	5.000	CON	GA	0.000	-0.590
552.000	2.000	1537.000	2.000	9.000	2.000	5.000	DOT	AF	0.000	0.775
554.000	2.000	1114.000	3.000	32.000	1.000	5.000	DOT	RW	1.000	0.062

Table C.1 (continued) - Subject 238

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	5.000	2507.000	2.000	38.000	1.000	1.000	CHO	AF	4.000	1.311
114.000	3.000	2546.000	2.000	14.000	3.000	1.000	CHO	RW	0.000	1.354
121.000	6.000	793.000	2.000	13.000	6.000	1.000	NOM	MI	0.000	-0.582
123.000	5.000	885.000	1.000	39.000	5.000	1.000	NOM	GA	0.000	-0.480
132.000	5.000	2791.000	2.000	2.000	3.000	1.000	ISA	AF	2.000	1.625
134.000	2.000	1654.000	2.000	37.000	4.000	1.000	ISA	RW	-2.000	0.369
141.000	5.000	669.000	1.000	50.000	6.000	1.000	CON	MI	-1.000	-0.719
143.000	3.000	2371.000	2.000	59.000	2.000	1.000	CON	GA	1.000	1.161
152.000	8.000	2046.000	2.000	57.000	1.000	1.000	DOT	AF	7.000	0.802
154.000	1.000	3805.000	1.000	17.000	1.000	1.000	DOT	RW	0.000	2.745
211.100	2.000	279.000	1.000	55.000	2.000	2.100	CHO	MI	0.000	-1.149
211.200	2.000	1238.000	1.000	7.000	2.000	2.200	CHO	MI	0.000	-0.090
213.100	5.000	1256.000	1.000	32.000	5.000	2.100	CHO	GA	0.000	-0.070
213.200	3.000	896.000	1.000	51.000	3.000	2.200	CHO	GA	0.000	-0.468
222.100	1.000	651.000	1.000	21.000	6.000	2.100	NOM	AF	-5.000	-0.739
222.200	4.000	622.000	1.000	19.000	1.000	2.200	NOM	AF	3.000	-0.771
224.100	5.000	405.000	1.000	41.000	6.000	2.100	NOM	RW	-1.000	-1.010
224.200	6.000	1347.000	1.000	42.000	1.000	2.200	NOM	RW	5.000	0.030
231.100	3.000	279.000	1.000	60.000	3.000	2.100	ISA	MI	0.000	-1.149
231.200	4.000	916.000	1.000	28.000	2.000	2.200	ISA	MI	2.000	-0.446
233.100	5.000	1398.000	1.000	26.000	5.000	2.100	ISA	GA	0.000	0.086
233.200	3.000	1332.000	1.000	33.000	3.000	2.200	ISA	GA	0.000	0.014
242.100	3.000	346.000	1.000	56.000	3.000	2.100	CON	AF	0.000	-1.075
242.200	4.000	1603.000	1.000	3.000	1.000	2.200	CON	AF	3.000	0.313
244.100	5.000	461.000	1.000	24.000	5.000	2.100	CON	RW	0.000	-0.948
244.200	6.000	1602.000	1.000	27.000	1.000	2.200	CON	RW	5.000	0.312
251.100	2.000	562.000	1.000	40.000	2.000	2.100	DOT	MI	0.000	-0.837
251.200	2.000	733.000	1.000	54.000	2.000	2.200	DOT	MI	0.000	-0.648
253.100	5.000	1756.000	2.000	15.000	5.000	2.100	DOT	GA	0.000	0.482
253.200	3.000	2503.000	1.000	11.000	3.000	2.200	DOT	GA	0.000	1.307
312.000	3.000	396.000	1.000	58.000	3.000	3.000	CHO	AF	0.000	-1.020
314.000	1.000	1272.000	1.000	6.000	4.000	3.000	CHO	RW	-3.000	-0.053
321.000	4.000	3263.000	2.000	31.000	4.000	3.000	NOM	MI	0.000	2.146
323.000	6.000	1481.000	1.000	9.000	6.000	3.000	NOM	GA	0.000	0.178
332.000	5.000	3235.000	2.000	12.000	3.000	3.000	ISA	AF	2.000	2.115
334.000	5.000	1371.000	2.000	46.000	5.000	3.000	ISA	RW	0.000	0.057
341.000	4.000	2337.000	1.000	43.000	4.000	3.000	CON	MI	0.000	1.123
343.000	2.000	1692.000	2.000	8.000	2.000	3.000	CON	GA	0.000	0.411
352.000	4.000	550.000	1.000	25.000	4.000	3.000	DOT	AF	0.000	-0.850
354.000	6.000	1853.000	2.000	34.000	6.000	3.000	DOT	RW	0.000	0.589
411.000	2.000	329.000	1.000	36.000	2.000	4.000	CHO	MI	0.000	-1.094
413.000	1.000	345.000	1.000	48.000	1.000	4.000	CHO	GA	0.000	-1.076
422.000	4.000	1034.000	2.000	16.000	4.000	4.000	NOM	AF	0.000	-0.316
424.000	4.000	466.000	2.000	49.000	4.000	4.000	NOM	RW	0.000	-0.943
431.000	2.000	483.000	1.000	23.000	2.000	4.000	ISA	MI	0.000	-0.924
433.000	1.000	315.000	1.000	35.000	1.000	4.000	ISA	GA	0.000	-1.110
442.000	3.000	1154.000	1.000	20.000	3.000	4.000	CON	AF	0.000	-0.183
444.000	2.000	3207.000	2.000	10.000	1.000	4.000	CON	RW	1.000	2.084
451.000	2.000	463.000	1.000	47.000	2.000	4.000	DOT	MI	0.000	-0.946
453.000	1.000	381.000	1.000	18.000	1.000	4.000	DOT	GA	0.000	-1.037
512.000	1.000	2238.000	1.000	1.000	2.000	5.000	CHO	AF	-1.000	1.014
514.000	1.000	2371.000	2.000	5.000	1.000	5.000	CHO	RW	0.000	1.161
521.000	1.000	636.000	1.000	53.000	1.000	5.000	NOM	MI	0.000	-0.755
523.000	2.000	591.000	1.000	22.000	1.000	5.000	NOM	GA	1.000	-0.805
532.000	2.000	537.000	1.000	45.000	2.000	5.000	ISA	AF	0.000	-0.864
534.000	1.000	923.000	2.000	30.000	1.000	5.000	ISA	RW	0.000	-0.438
541.000	1.000	1031.000	1.000	52.000	1.000	5.000	CON	MI	0.000	-0.319
543.000	1.000	630.000	1.000	44.000	1.000	5.000	CON	GA	0.000	-0.762
552.000	2.000	2355.000	2.000	29.000	2.000	5.000	DOT	AF	0.000	1.143
554.000	1.000	1994.000	2.000	4.000	1.000	5.000	DOT	RW	0.000	0.745

Table C.1 (continued) - Subject 239

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	1.000	1788.000	1.000	20.000	1.000	1.000	CHO	AF	0.000	0.141
114.000	3.000	1478.000	2.000	31.000	3.000	1.000	CHO	RW	0.000	-0.169
121.000	6.000	736.000	3.000	51.000	6.000	1.000	NOM	MI	0.000	-0.909
123.000	5.000	739.000	3.000	48.000	5.000	1.000	NOM	GA	0.000	-0.906
132.000	4.000	1307.000	2.000	32.000	3.000	1.000	ISA	AF	1.000	-0.339
134.000	4.000	1730.000	2.000	1.000	4.000	1.000	ISA	RW	0.000	0.083
141.000	6.000	873.000	3.000	55.000	6.000	1.000	CON	MI	0.000	-0.773
143.000	4.000	1286.000	3.000	25.000	2.000	1.000	CON	GA	2.000	-0.360
152.000	3.000	6221.000	2.000	24.000	1.000	1.000	DOT	AF	2.000	4.565
154.000	3.000	960.000	3.000	42.000	1.000	1.000	DOT	RW	2.000	-0.686
211.100	2.000	528.000	1.000	44.000	2.000	2.100	CHO	MI	0.000	-1.117
211.200	6.000	1321.000	1.000	13.000	2.000	2.200	CHO	MI	4.000	-0.325
213.100	6.000	1080.000	2.000	38.000	5.000	2.100	CHO	GA	1.000	-0.566
213.200	3.000	1201.000	3.000	46.000	3.000	2.200	CHO	GA	0.000	-0.445
222.100	6.000	2725.000	2.000	52.000	6.000	2.100	NOM	AF	0.000	1.076
222.200	4.000	1863.000	1.000	28.000	1.000	2.200	NOM	AF	3.000	0.216
224.100	6.000	1113.000	1.000	40.000	6.000	2.100	NOM	RW	0.000	-0.533
224.200	1.000	782.000	1.000	53.000	1.000	2.200	NOM	RW	0.000	-0.863
231.100	3.000	800.000	1.000	6.000	3.000	2.100	ISA	MI	0.000	-0.846
231.200	4.000	846.000	1.000	58.000	2.000	2.200	ISA	MI	2.000	-0.800
233.100	5.000	1602.000	1.000	23.000	5.000	2.100	ISA	GA	0.000	-0.045
233.200	3.000	2485.000	2.000	15.000	3.000	2.200	ISA	GA	0.000	0.836
242.100	6.000	2306.000	1.000	9.000	3.000	2.100	CON	AF	3.000	0.658
242.200	4.000	778.000	1.000	36.000	1.000	2.200	CON	AF	3.000	-0.867
244.100	5.000	666.000	2.000	59.000	5.000	2.100	CON	RW	0.000	-0.979
244.200	1.000	3385.000	2.000	17.000	1.000	2.200	CON	RW	0.000	1.735
251.100	2.000	892.000	1.000	11.000	2.000	2.100	DOT	MI	0.000	-0.754
251.200	6.000	1880.000	1.000	8.000	2.000	2.200	DOT	MI	4.000	0.232
253.100	6.000	1359.000	1.000	27.000	5.000	2.100	DOT	GA	1.000	-0.288
253.200	4.000	1911.000	3.000	57.000	3.000	2.200	DOT	GA	1.000	0.263
312.000	5.000	1499.000	2.000	45.000	3.000	3.000	CHO	AF	2.000	-0.148
314.000	1.000	1769.000	2.000	50.000	4.000	3.000	CHO	RW	-3.000	0.122
321.000	2.000	1538.000	2.000	19.000	4.000	3.000	NOM	MI	-2.000	-0.109
323.000	6.000	2074.000	2.000	29.000	6.000	3.000	NOM	GA	0.000	0.426
332.000	3.000	4362.000	2.000	4.000	3.000	3.000	ISA	AF	0.000	2.710
334.000	5.000	2792.000	2.000	18.000	5.000	3.000	ISA	RW	0.000	1.143
341.000	2.000	755.000	2.000	60.000	4.000	3.000	CON	MI	-2.000	-0.890
343.000	2.000	2845.000	2.000	21.000	2.000	3.000	CON	GA	0.000	1.196
352.000	4.000	2421.000	1.000	14.000	4.000	3.000	DOT	AF	0.000	0.772
354.000	6.000	1554.000	2.000	35.000	6.000	3.000	DOT	RW	0.000	-0.093
411.000	2.000	992.000	1.000	39.000	2.000	4.000	CHO	MI	0.000	-0.654
413.000	1.000	1844.000	2.000	37.000	1.000	4.000	CHO	GA	0.000	0.197
422.000	4.000	1299.000	1.000	22.000	4.000	4.000	NOM	AF	0.000	-0.347
424.000	4.000	1126.000	1.000	12.000	4.000	4.000	NOM	RW	0.000	-0.520
431.000	2.000	1250.000	1.000	5.000	2.000	4.000	ISA	MI	0.000	-0.396
433.000	1.000	979.000	1.000	10.000	1.000	4.000	ISA	GA	0.000	-0.667
442.000	3.000	767.000	1.000	7.000	3.000	4.000	CON	AF	0.000	-0.878
444.000	1.000	1276.000	2.000	26.000	1.000	4.000	CON	RW	0.000	-0.370
451.000	2.000	543.000	1.000	41.000	2.000	4.000	DOT	MI	0.000	-1.102
453.000	1.000	553.000	1.000	34.000	1.000	4.000	DOT	GA	0.000	-1.092
512.000	2.000	3398.000	4.000	2.000	2.000	5.000	CHO	AF	0.000	1.748
514.000	1.000	1890.000	3.000	54.000	1.000	5.000	CHO	RW	0.000	0.242
521.000	1.000	2579.000	1.000	33.000	1.000	5.000	NOM	MI	0.000	0.930
523.000	3.000	1174.000	3.000	56.000	1.000	5.000	NOM	GA	2.000	-0.472
532.000	2.000	2915.000	3.000	16.000	2.000	5.000	ISA	AF	0.000	1.266
534.000	2.000	1084.000	2.000	30.000	1.000	5.000	ISA	RW	1.000	-0.562
541.000	1.000	1468.000	3.000	49.000	1.000	5.000	CON	MI	0.000	-0.179
543.000	1.000	1735.000	3.000	3.000	1.000	5.000	CON	GA	0.000	0.088
552.000	1.000	1446.000	3.000	43.000	2.000	5.000	DOT	AF	-1.000	-0.201
554.000	2.000	2257.000	3.000	47.000	1.000	5.000	DOT	RW	1.000	0.609

Table C.1 (continued) - Subject 2101

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	5.000	1828.000	2.000	3.000	1.000	1.000	CHO	AF	4.000	1.048
114.000	3.000	1431.000	2.000	27.000	3.000	1.000	CHO	RW	0.000	0.447
121.000	6.000	1412.000	2.000	34.000	6.000	1.000	NOM	MI	0.000	0.418
123.000	4.000	893.000	1.000	6.000	5.000	1.000	NOM	GA	-1.000	-0.368
132.000	5.000	2075.000	2.000	19.000	3.000	1.000	ISA	AF	2.000	1.422
134.000	1.000	2804.000	2.000	12.000	4.000	1.000	ISA	RW	-3.000	2.526
141.000	8.000	782.000	1.000	54.000	6.000	1.000	CON	MI	2.000	-0.536
143.000	8.000	1012.000	2.000	50.000	2.000	1.000	CON	GA	6.000	-0.188
152.000	8.000	1426.000	2.000	43.000	1.000	1.000	DOT	AF	7.000	0.439
154.000	8.000	1965.000	2.000	32.000	1.000	1.000	DOT	RW	7.000	1.255
211.100	2.000	273.000	1.000	45.000	2.000	2.100	CHO	MI	0.000	-1.307
211.200	2.000	715.000	1.000	39.000	2.000	2.200	CHO	MI	0.000	-0.638
213.100	6.000	1038.000	1.000	38.000	5.000	2.100	CHO	GA	1.000	-0.148
213.200	3.000	2075.000	2.000	11.000	3.000	2.200	CHO	GA	0.000	1.422
222.100	1.000	1911.000	1.000	29.000	6.000	2.100	NOM	AF	-5.000	1.174
222.200	4.000	1006.000	1.000	20.000	1.000	2.200	NOM	AF	3.000	-0.197
224.100	5.000	1331.000	1.000	17.000	6.000	2.100	NOM	RW	-1.000	0.295
224.200	6.000	1187.000	1.000	16.000	1.000	2.200	NOM	RW	5.000	0.077
231.100	3.000	401.000	1.000	28.000	3.000	2.100	ISA	MI	0.000	-1.113
231.200	2.000	1175.000	2.000	30.000	2.000	2.200	ISA	MI	0.000	0.059
233.100	5.000	556.000	2.000	60.000	5.000	2.100	ISA	GA	0.000	-0.878
233.200	1.000	1151.000	2.000	58.000	3.000	2.200	ISA	GA	-2.000	0.023
242.100	3.000	542.000	1.000	4.000	3.000	2.100	CON	AF	0.000	-0.900
242.200	4.000	926.000	1.000	26.000	1.000	2.200	CON	AF	3.000	-0.318
244.100	5.000	621.000	1.000	14.000	5.000	2.100	CON	RW	0.000	-0.780
244.200	1.000	1411.000	2.000	36.000	1.000	2.200	CON	RW	0.000	0.416
251.100	2.000	537.000	1.000	23.000	2.000	2.100	DOT	MI	0.000	-0.907
251.200	2.000	1516.000	1.000	5.000	2.000	2.200	DOT	MI	0.000	0.575
253.100	6.000	611.000	2.000	52.000	5.000	2.100	DOT	GA	1.000	-0.795
253.200	7.000	2496.000	2.000	48.000	3.000	2.200	DOT	GA	4.000	2.060
312.000	3.000	793.000	1.000	21.000	3.000	3.000	CHO	AF	0.000	-0.520
314.000	4.000	444.000	1.000	41.000	4.000	3.000	CHO	RW	0.000	-1.048
321.000	5.000	1044.000	1.000	47.000	4.000	3.000	NOM	MI	1.000	-0.139
323.000	2.000	630.000	1.000	51.000	6.000	3.000	NOM	GA	-4.000	-0.766
332.000	3.000	2267.000	3.000	55.000	3.000	3.000	ISA	AF	0.000	1.713
334.000	2.000	3041.000	2.000	7.000	5.000	3.000	ISA	RW	-3.000	2.885
341.000	4.000	517.000	1.000	57.000	4.000	3.000	CON	MI	0.000	-0.938
343.000	5.000	690.000	2.000	49.000	2.000	3.000	CON	GA	3.000	-0.676
352.000	4.000	2726.000	1.000	22.000	4.000	3.000	DOT	AF	0.000	2.408
354.000	6.000	1506.000	1.000	53.000	6.000	3.000	DOT	RW	0.000	0.560
411.000	2.000	411.000	1.000	35.000	2.000	4.000	CHO	MI	0.000	-1.098
413.000	1.000	441.000	1.000	24.000	1.000	4.000	CHO	GA	0.000	-1.053
422.000	4.000	1044.000	1.000	15.000	4.000	4.000	NOM	AF	0.000	-0.139
424.000	4.000	762.000	1.000	1.000	4.000	4.000	NOM	RW	0.000	-0.566
431.000	2.000	880.000	1.000	44.000	2.000	4.000	ISA	MI	0.000	-0.388
433.000	1.000	558.000	1.000	31.000	1.000	4.000	ISA	GA	0.000	-0.875
442.000	3.000	1096.000	2.000	8.000	3.000	4.000	CON	AF	0.000	-0.061
444.000	1.000	459.000	1.000	56.000	1.000	4.000	CON	RW	0.000	-1.025
451.000	2.000	412.000	1.000	10.000	2.000	4.000	DOT	MI	0.000	-1.097
453.000	1.000	770.000	1.000	2.000	1.000	4.000	DOT	GA	0.000	-0.554
512.000	2.000	1324.000	2.000	46.000	2.000	5.000	CHO	AF	0.000	0.285
514.000	1.000	2076.000	2.000	33.000	1.000	5.000	CHO	RW	0.000	1.423
521.000	1.000	988.000	2.000	25.000	1.000	5.000	NOM	MI	0.000	-0.224
523.000	2.000	1121.000	1.000	13.000	1.000	5.000	NOM	GA	1.000	-0.023
532.000	2.000	989.000	2.000	59.000	2.000	5.000	ISA	AF	0.000	-0.223
534.000	1.000	1314.000	1.000	18.000	1.000	5.000	ISA	RW	0.000	0.269
541.000	1.000	671.000	2.000	37.000	1.000	5.000	CON	MI	0.000	-0.704
543.000	1.000	444.000	1.000	40.000	1.000	5.000	CON	GA	0.000	-1.048
552.000	2.000	1093.000	1.000	9.000	2.000	5.000	DOT	AF	0.000	-0.065
554.000	2.000	545.000	2.000	42.000	1.000	5.000	DOT	RW	1.000	-0.895

Table C.1 (continued) - Subject 2201

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	2.000	1159.000	1.000	38.000	1.000	1.000	CHO	AF	1.000	-0.036
114.000	5.000	1313.000	2.000	25.000	3.000	1.000	CHO	RW	2.000	0.197
121.000	5.000	1023.000	1.000	18.000	6.000	1.000	NOM	MI	-1.000	-0.242
123.000	4.000	1331.000	1.000	36.000	5.000	1.000	NOM	GA	-1.000	0.225
132.000	4.000	1100.000	2.000	56.000	3.000	1.000	ISA	AF	1.000	-0.125
134.000	3.000	1754.000	1.000	12.000	4.000	1.000	ISA	RW	-1.000	0.865
141.000	6.000	981.000	2.000	19.000	6.000	1.000	CON	MI	0.000	-0.305
143.000	4.000	1494.000	2.000	28.000	2.000	1.000	CON	GA	2.000	0.471
152.000	4.000	2975.000	2.000	39.000	1.000	1.000	DOT	AF	3.000	2.713
154.000	3.000	1409.000	4.000	42.000	1.000	1.000	DOT	RW	2.000	0.343
211.100	2.000	443.000	1.000	40.000	2.000	2.100	CHO	MI	0.000	-1.119
211.200	2.000	406.000	1.000	55.000	2.000	2.200	CHO	MI	0.000	-1.175
213.100	5.000	912.000	1.000	44.000	5.000	2.100	CHO	GA	0.000	-0.410
213.200	3.000	1958.000	1.000	7.000	3.000	2.200	CHO	GA	0.000	1.174
222.100	6.000	1059.000	4.000	31.000	6.000	2.100	NOM	AF	0.000	-0.187
222.200	1.000	677.000	1.000	53.000	1.000	2.200	NOM	AF	0.000	-0.765
224.100	5.000	866.000	1.000	21.000	6.000	2.100	NOM	RW	-1.000	-0.479
224.200	6.000	1544.000	2.000	3.000	1.000	2.200	NOM	RW	5.000	0.547
231.100	3.000	499.000	1.000	16.000	3.000	2.100	ISA	MI	0.000	-1.035
231.200	2.000	2110.000	2.000	4.000	2.000	2.200	ISA	MI	0.000	1.404
233.100	5.000	1559.000	1.000	51.000	5.000	2.100	ISA	GA	0.000	0.570
233.200	3.000	1325.000	1.000	5.000	3.000	2.200	ISA	GA	0.000	0.215
242.100	3.000	356.000	1.000	32.000	3.000	2.100	CON	AF	0.000	-1.251
242.200	1.000	1262.000	1.000	34.000	1.000	2.200	CON	AF	0.000	0.120
244.100	5.000	444.000	1.000	43.000	5.000	2.100	CON	RW	0.000	-1.118
244.200	1.000	1290.000	1.000	14.000	1.000	2.200	CON	RW	0.000	0.163
251.100	2.000	464.000	1.000	24.000	2.000	2.100	DOT	MI	0.000	-1.088
251.200	2.000	736.000	2.000	45.000	2.000	2.200	DOT	MI	0.000	-0.676
253.100	5.000	1116.000	1.000	17.000	5.000	2.100	DOT	GA	0.000	-0.101
253.200	3.000	1125.000	1.000	59.000	3.000	2.200	DOT	GA	0.000	-0.087
312.000	3.000	904.000	1.000	13.000	3.000	3.000	CHO	AF	0.000	-0.422
314.000	4.000	446.000	1.000	54.000	4.000	3.000	CHO	RW	0.000	-1.115
321.000	2.000	1537.000	1.000	48.000	4.000	3.000	NOM	MI	-2.000	0.536
323.000	2.000	736.000	1.000	27.000	6.000	3.000	NOM	GA	-4.000	-0.676
332.000	3.000	2608.000	3.000	11.000	3.000	3.000	ISA	AF	0.000	2.157
334.000	5.000	1610.000	1.000	6.000	5.000	3.000	ISA	RW	0.000	0.647
341.000	4.000	812.000	1.000	35.000	4.000	3.000	CON	MI	0.000	-0.561
343.000	5.000	1246.000	2.000	46.000	2.000	3.000	CON	GA	3.000	0.096
352.000	4.000	787.000	1.000	58.000	4.000	3.000	DOT	AF	0.000	-0.599
354.000	6.000	1081.000	2.000	52.000	6.000	3.000	DOT	RW	0.000	-0.154
411.000	2.000	565.000	1.000	26.000	2.000	4.000	CHO	MI	0.000	-0.935
413.000	1.000	556.000	1.000	29.000	1.000	4.000	CHO	GA	0.000	-0.948
422.000	4.000	1095.000	1.000	1.000	4.000	4.000	NOM	AF	0.000	-0.133
424.000	4.000	418.000	1.000	23.000	4.000	4.000	NOM	RW	0.000	-1.157
431.000	2.000	674.000	1.000	10.000	2.000	4.000	ISA	MI	0.000	-0.770
433.000	1.000	516.000	1.000	30.000	1.000	4.000	ISA	GA	0.000	-1.009
442.000	3.000	809.000	2.000	22.000	3.000	4.000	CON	AF	0.000	-0.566
444.000	1.000	410.000	1.000	41.000	1.000	4.000	CON	RW	0.000	-1.169
451.000	2.000	589.000	1.000	9.000	2.000	4.000	DOT	MI	0.000	-0.898
453.000	1.000	488.000	1.000	47.000	1.000	4.000	DOT	GA	0.000	-1.051
512.000	2.000	1400.000	2.000	20.000	2.000	5.000	CHO	AF	0.000	0.329
514.000	2.000	1977.000	2.000	50.000	1.000	5.000	CHO	RW	1.000	1.202
521.000	3.000	2593.000	1.000	2.000	1.000	5.000	NOM	MI	2.000	2.135
523.000	2.000	1783.000	1.000	33.000	1.000	5.000	NOM	GA	1.000	0.909
532.000	2.000	1322.000	1.000	15.000	2.000	5.000	ISA	AF	0.000	0.211
534.000	1.000	1873.000	1.000	8.000	1.000	5.000	ISA	RW	0.000	1.045
541.000	1.000	1459.000	1.000	57.000	1.000	5.000	CON	MI	0.000	0.418
543.000	1.000	1200.000	1.000	60.000	1.000	5.000	CON	GA	0.000	0.026
552.000	2.000	3518.000	1.000	49.000	2.000	5.000	DOT	AF	0.000	3.535
554.000	2.000	1256.000	2.000	37.000	1.000	5.000	DOT	RW	1.000	0.111

Table C.1 (continued) - Subject 2202 *

Card	Resp.	RT	Conf.	Order	Cor.	Ques	Map	Dist	R/W	SdRT
112.000	5.000	1468.000	1.000	35.000	1.000	1.000	CHO	AF	4.000	-0.714
114.000	4.000	2310.000	2.000	59.000	3.000	1.000	CHO	RW	1.000	-0.453
121.000	5.000	1313.000	1.000	51.000	6.000	1.000	NOM	MI	-1.000	-0.762
123.000	3.000	1078.000	1.000	45.000	5.000	1.000	NOM	GA	-2.000	-0.834
132.000	7.000	5204.000	2.000	13.000	3.000	1.000	ISA	AF	4.000	0.442
134.000	4.000	5025.000	2.000	12.000	4.000	1.000	ISA	RW	0.000	0.386
141.000	8.000	5569.000	1.000	10.000	6.000	1.000	CON	MI	2.000	0.555
143.000	6.000	12045.000	2.000	4.000	2.000	1.000	CON	GA	4.000	2.557
152.000	4.000	3926.000	2.000	27.000	1.000	1.000	DOT	AF	3.000	0.046
154.000	1.000	4489.000	2.000	48.000	1.000	1.000	DOT	RW	0.000	0.221
211.100	2.000	1338.000	1.000	34.000	2.000	2.100	CHO	MI	0.000	-0.754
211.200	6.000	3116.000	1.000	2.000	2.000	2.200	CHO	MI	4.000	-0.204
213.100	5.000	8861.000	1.000	28.000	5.000	2.100	CHO	GA	0.000	1.573
213.200	2.000	8483.000	2.000	29.000	3.000	2.200	CHO	GA	-1.000	1.456
222.100	3.000	6120.000	1.000	17.000	6.000	2.100	NOM	AF	-3.000	0.725
222.200	1.000	2414.000	1.000	41.000	1.000	2.200	NOM	AF	0.000	-0.421
224.100	5.000	2099.000	1.000	1.000	6.000	2.100	NOM	RW	-1.000	-0.519
224.200	1.000	3578.000	1.000	9.000	1.000	2.200	NOM	RW	0.000	-0.061
231.100	3.000	604.000	1.000	49.000	3.000	2.100	ISA	MI	0.000	-0.981
231.200	6.000	888.000	1.000	8.000	2.000	2.200	ISA	MI	4.000	-0.893
233.100	5.000	1098.000	1.000	54.000	5.000	2.100	ISA	GA	0.000	-0.828
233.200	8.000	9259.000	1.000	26.000	3.000	2.200	ISA	GA	5.000	1.696
242.100	3.000	1045.000	1.000	18.000	3.000	2.100	CON	AF	0.000	-0.845
242.200	1.000	2179.000	1.000	24.000	1.000	2.200	CON	AF	0.000	-0.494
244.100	5.000	552.000	1.000	60.000	5.000	2.100	CON	RW	0.000	-0.997
244.200	5.000	3989.000	1.000	43.000	1.000	2.200	CON	RW	4.000	0.066
251.100	2.000	1208.000	1.000	31.000	2.000	2.100	DOT	MI	0.000	-0.794
251.200	6.000	2417.000	1.000	32.000	2.000	2.200	DOT	MI	4.000	-0.420
253.100	5.000	3044.000	1.000	33.000	5.000	2.100	DOT	GA	0.000	-0.226
253.200	4.000	9617.000	2.000	50.000	3.000	2.200	DOT	GA	1.000	1.806
312.000	3.000	2828.000	1.000	39.000	3.000	3.000	CHO	AF	0.000	-0.293
314.000	6.000	3935.000	1.000	36.000	4.000	3.000	CHO	RW	2.000	0.049
321.000	2.000	9586.000	1.000	22.000	4.000	3.000	NOM	MI	-2.000	1.797
323.000	6.000	2121.000	1.000	11.000	6.000	3.000	NOM	GA	0.000	-0.512
332.000	2.000	3433.000	1.000	55.000	3.000	3.000	ISA	AF	-1.000	-0.106
334.000	5.000	5752.000	1.000	42.000	5.000	3.000	ISA	RW	0.000	0.611
341.000	4.000	11795.000	1.000	19.000	4.000	3.000	CON	MI	0.000	2.480
343.000	2.000	3293.000	1.000	5.000	2.000	3.000	CON	GA	0.000	-0.149
352.000	1.000	8124.000	1.000	25.000	4.000	3.000	DOT	AF	-3.000	1.345
354.000	4.000	4025.000	1.000	30.000	6.000	3.000	DOT	RW	-2.000	0.077
411.000	2.000	556.000	1.000	57.000	2.000	4.000	CHO	MI	0.000	-0.996
413.000	1.000	1913.000	1.000	46.000	1.000	4.000	CHO	GA	0.000	-0.576
422.000	3.000	4850.000	1.000	38.000	4.000	4.000	NOM	AF	-1.000	0.332
424.000	2.000	3365.000	1.000	37.000	4.000	4.000	NOM	RW	-2.000	-0.127
431.000	2.000	1221.000	1.000	16.000	2.000	4.000	ISA	MI	0.000	-0.790
433.000	1.000	748.000	1.000	23.000	1.000	4.000	ISA	GA	0.000	-0.936
442.000	3.000	1387.000	1.000	21.000	3.000	4.000	CON	AF	0.000	-0.739
444.000	1.000	1086.000	1.000	40.000	1.000	4.000	CON	RW	0.000	-0.832
451.000	2.000	341.000	1.000	58.000	2.000	4.000	DOT	MI	0.000	-1.062
453.000	1.000	953.000	1.000	6.000	1.000	4.000	DOT	GA	0.000	-0.873
512.000	2.000	14022.000	1.000	20.000	2.000	5.000	CHO	AF	0.000	3.169
514.000	2.000	5742.000	2.000	56.000	1.000	5.000	CHO	RW	1.000	0.608
521.000	1.000	1420.000	1.000	44.000	1.000	5.000	NOM	MI	0.000	-0.729
523.000	2.000	2716.000	1.000	7.000	1.000	5.000	NOM	GA	1.000	-0.328
532.000	2.000	1612.000	1.000	53.000	2.000	5.000	ISA	AF	0.000	-0.669
534.000	2.000	7320.000	1.000	52.000	1.000	5.000	ISA	RW	1.000	1.096
541.000	1.000	3450.000	1.000	14.000	1.000	5.000	CON	MI	0.000	-0.101
543.000	1.000	1881.000	1.000	3.000	1.000	5.000	CON	GA	0.000	-0.586
552.000	2.000	1307.000	1.000	15.000	2.000	5.000	DOT	AF	0.000	-0.763
554.000	2.000	1430.000	1.000	47.000	1.000	5.000	DOT	RW	1.000	-0.725

BIBLIOGRAPHY

BIBLIOGRAPHY

Abler, R., J. Adams, and P. Gould. 1971. ***Spatial Organization: The Geographer's View of the World.*** Englewood Cliffs, New Jersey: Prentice-Hall, Incorporated.

Aldus Corporation. 1991. ***Aldus SuperCard, Version 1.6.*** San Diego, California: Aldus Corporation.

Aldus Corporation. 1993. ***Aldus SuperPaint Version 3.5.*** San Diego, California: Aldus Corporation.

Agnew, J. 1990. Sameness and Difference: Hartshorne's *The Nature of Geography* and Geography as Areal Variation. In Entrikin, J. and Brunn, S. (eds.) ***Reflections on Richard Hartshorne's The Nature of Geography.*** Washington, D.C.: Association of American Geographers: 121-139.

Bannister, D., and J. Mair. 1968. ***The Evaluation of Personal Constructs.*** New York: Academic Press.

Berry, B. 1964. Approaches to Regional Analysis: A Synthesis. ***Annals of the Association of American Geographers*** 54(1): 2-11.

Berry, B. 1968. A Synthesis of Formal and Functional Regions Using a General Field Theory. In Berry, B.J.L. and Marble, D.F. ***Spatial Analysis: A Reader in Statistical Geography.*** Englewood Cliffs, New Jersey: Prentice-Hall Incorporated: 419-430.

Biederman, I. 1987. Recognition-by-Components: A Theory of Human Image Understanding. ***Psychological Review*** 94(2): 115-147.

Biederman, I., and T. Blickle. 1985. The Perception of Objects with Deleted Contours. Unpublished Manuscript, State University of New York at Buffalo.

Biederman, I., and G. Ju. 1986. Surface vs. Edge-Based Determinants of Visual Recognition. ***Cognitive Psychology*** 20(1): 38-64.

Biederman, I., G. Ju, and J. Clapper. 1985. The Perception of Partial Objects. Unpublished Manuscript, State University of New York at Buffalo.

Board, C. 1978. Map Reading Tasks Appropriate in Experimental Studies in Cartographic Communication. ***The Canadian Cartographer*** 15(1): 1-12.

Campbell, J. 1984. ***Introductory Cartography.*** Englewood Cliffs, New Jersey: Prentice-Hall, Incorporated.

Carstensen, L. 1982. A Continuous Shading Scheme for Two Variable Maps. ***Cartographica*** 19: 53-70.

Chang, K. 1976. Data Differentiation and Cartographic Symbolization. ***The Canadian Cartographer*** 13(1): 60-68.

Cole, D. 1979. Psychophysical Testing in Cartography: An Evaluation of Methodology. M.A. thesis, Michigan State University.

Cuff, D. 1972. Value vs. Chroma in Color Schemes on Quantitative Maps. ***The Canadian Cartographer*** 9(2): 134-140.

Cuff, D. 1973. Color Temperature Maps. ***The Cartographic Journal*** 10(1): 17-21.

Dahlberg, R. 1967. Towards the Improvement of the Dot Map. ***International Yearbook of Cartography*** VII: 157-167.

DiBiase, D. 1990. Visualization in the Earth Sciences. ***Earth and Mineral Sciences,*** Bulletin of the College of Earth and Mineral Sciences, The Pennsylvania State University 59(2): 13-18.

Dobson, M. 1975. Symbol-Subject Matter Relationships in Thematic Cartography. ***The Canadian Cartographer*** 12(1): 52-67.

Dryer, C. 1915. Natural Economic Regions. ***Annals of the Association of American Geographers*** 5(1): 121-125.

Eagle, M. and I. Leiter. 1964. Recall and Recognition in Intentional and Incidental Learning. ***Journal of Experimental Psychology*** 68(1): 58-63. .

Eastman, J. 1985. Graphic Organization and Memory Structures for Map Learning. ***Cartographica*** 22(1): 1-20.

Eilertsen, J. 1980. The Effectiveness of Color Dot Maps in Region Portrayal. M.A. thesis, Michigan State University.

Fenneman, N. 1928. Physiographic Boundaries within the United States. ***Annals of the Association of American Geographers*** 18: 261-353.

Fisher, P.F. 1994. Hearing the reliability in classified remotely sensed images. ***Cartography and Geographic Information Systems*** 21(1): 31-36.

Gibson, E. 1965. Learning to Read. ***Science*** 148: 1066-1072.

Gibson, E. 1978. Understanding the Subjective Meaning of Places. In Ley, D. and M. Samuels (eds.). ***Man's Place: Themes in Geographic Humanism.*** Chicago, Illinois: Maaroufa Press: 138-54.

Gilbert, A. 1988. The New Regional Geography in English and French-Speaking Countries. ***Progress in Human Geography*** 12(2): 208-228.

Gilmartin, P. 1981. The Interface of Cognitive and Psychophysical Research in Cartography. ***Cartographica*** 18(3): 9-20.

Glanzer, M. 1982. Short-Term Memory. In Puff, C. (ed.). ***Handbook of Research Methods in Human Memory and Cognition.*** London: Academic Press: 257-285.

Gore, C. 1984. ***Regions in Question: Space, Development Theory, and Regional Policy.*** New York, New York: Methuen & Company.

Griffin, T. and B. Lock. 1976. The Perception Problem in Contour Interpretation. ***The Cartographic Journal*** 16: 61-71.

Grigg, D. 1965. The Logic of Regional Systems. ***Annals of the Association of American Geographers*** 55(4): 465-491.

Grigg, D. 1967. Regions, Models and Classes. In Chorley, R. and P. Haggett (eds.) ***Models in Geography.*** London: Methuen and Company Ltd.: 461-510.

Groop, R. and Harman, J. 1988. Cartographic Representation of Transitional Boundaries. Paper presented at AAG Annual Meeting, Phoenix, Arizona, April 6-10.

Groop, R. and P. Smith. 1982. A Dot Matrix Method of Portraying Continuous Surface. ***The American Cartographer*** 9(2): 123-130.

Guelke, L. 1977. Cartographic Communication and Geographic Understanding. In Guelke, L. (ed.). ***The Nature of Cartographic Communication.*** Cartographica, Monograph 19: 129-145.

Haggett, P. 1983. ***Geography: A Modern Synthesis,*** Third Edition. New York: Harper and Row, Publishers.

Head, C.G. 1984. The Map as Natural Language: A Paradigm for Understanding. In Board, C. (ed.). ***New Insights in Cartographic Communication.*** Cartographica, Monograph 31: 1-36.

Hartshorne, R. 1939. ***The Nature of Geography.*** Lancaster, Pennsylvania: The Association of American Geographers.

Hartshorne, R. 1959. ***Perspectives on the Nature of Geography.*** Published for the Association of American Geographers. Chicago: Rand McNally and Company.

Herbertson, A.J. 1905. The Major Natural Region: An Essay in Systematic Geography. ***The Geographical Journal*** 25(3): 300-312.

Hsu, M. 1979. The Cartographer's Conceptual Process and Thematic Symbolization. ***The American Cartographer*** 6(2): 117-127.

Huntington, E. 1911. The Effect of Barometric Variations upon Mental Activity. Paper presented at AAG Annual Meeting, Washington, D.C..

Huntington, E. 1924. Geography and Natural Selection: A Preliminary Study of the Origins and Development of Racial Character. ***Annals of the Association of American Geographers*** 14: 1-16.

James, P. 1929. The Blackstone River Valley: A Study in Chorography in Southern New England. ***Annals of the Association of American Geographers*** 19(2): 67-109.

James, P. 1952. Toward a Further Understanding of the Regional Concept. ***Annals of the Association of American Geographers*** 42(3): 195-222.

James, P. and G. Martin. 1981. ***All Possible Worlds: A History of Geographical Ideas.*** New York: John Wiley and Sons.

Jenks. G. 1953. "Pointillism" as a Cartographic Technique. ***The Professional Geographer*** 5(5): 4-6.

Jenks, G. 1970. Conceptual and Perceptual Errors in Thematic Mapping. ***Proceedings,*** American Congress on Surveying and Mapping: 174-188.

Jenks, G. 1973. Visual Integration in Thematic Mapping: Fact or Fiction? ***International Yearbook of Cartography*** XIII: 27-34.

Jenks, G. and D. Knos. 1961. The Use of Shading Patterns in Graded Series. ***Annals of the Association of American Geographers*** 51(8): 316-334.

Johnston, R. 1983. ***Geography and Geographers: Anglo-American Human Geography since 1945,*** Second Edition. Baltimore, Maryland: Edward Arnold.

Kimble, G. 1951. The Inadequacy of the Regional Concept. In Stamp, L. and S. Wooldridge (eds.). ***London Essays in Geography.*** Cambridge: 151-174.

Kimerling, A.J. 1985. The Comparison of Equal-Value Gray Scales. ***The American Cartographer*** 12(2): 132-142.

Knox, P. 1987. ***Urban Social Geography: An Introduction,*** Second Edition. New York: John Wiley and Sons, Incorporated.

Kosslyn, S. and K. Holyoak. 1982. Imagery. In Puff, C. (ed.). ***Handbook of Research Methods in Human Memory and Cognition.*** London: Academic Press: 315-347.

Kumler, M. 1988. Mapping Smooth Surfaces with Continuous Tone Maps. M.A. thesis, Michigan State University.

Kumler, M. and R. Groop. 1990. Continuous-Tone Mapping of Smooth Surfaces. ***Cartography and Geographic Information Systems*** 17(4): 279-289.

Lavin, S. 1979. Region Perception Variability on Choropleth Maps: Pattern Complexity Effects. Ph.D. dissertation, University of Kansas.

Lavin, S. 1986. Mapping continuous geographical distributions using dot-density shading. ***The American Cartographer*** 13(2): 140-150.

Lewis, M. 1991. Elusive Societies: A Regional-Cartographical Approach to the Study of Human Relatedness. ***Annals of the Association of American Geographers*** 81(4): 605-626.

Lloyd, R. and Steinke, T. 1976. The Decision Making Process for Judging Similarity of Choropleth Maps. ***The American Cartographer*** 3(2): 177-184.

Loftus, G. 1982. Picture Memory Methodology. In Puff, C. (ed.). ***Handbook of Research Methods in Human Memory and Cognition.*** London: Academic Press: 257-285.

McCleary Jr., G. 1975. In Pursuit of the Map User. ***Proceedings of the International Symposium on Computer-Assisted Cartography, Auto-Carto II***: 238-250.

MacEachren, A. 1982a. The Role of Complexity and Symbolization Method in Thematic Map Effectiveness. ***Annals of the Association of American Geographers*** 72(4): 495-513.

MacEachren, A. 1982b. Map Complexity: Comparison and Measurement. ***The American Cartographer*** 9(1): 31-46.

MacEachren, A. 1985. Accuracy of Thematic Maps: Implications of Choropleth Symbolization. ***Cartographica*** 22(1): 38-58.

MacEachren, A. 1991. Visualization of Data Uncertainty: Representational Issues. Working Paper for the June, 1991 NCGIA Specialist Meeting on Visualizing the Quality of Spatial Data.

MacEachren, A. 1994. ***Some Truth with Maps: A Primer on Symbolization and Design.*** Washington, D.C.: Association of American Geographers.

Mackinder, H. 1887. On the Scope and Methods of Geography. ***Proceedings of the Royal Geographical Society*** New Series 9: 141-160.

Mackinder, H. 1895. Modern Geography, German and English. ***Geographical Journal*** 6: 367-369.

Massey, D. 1984. ***Spatial Division of Labour: Social Structures and the Geography of Production.*** London: Macmillan.

Meinig, D. 1965. The Mormon Culture Region: Strategies and Patterns in the Geography of the American West, 1847-1964. ***Annals of the Association of American Geographers*** 55(2): 191-220.

Monmonier, M. 1974. Measures of Pattern Complexity for Choroplethic Maps. ***The American Cartographer*** 1(2): 159-169.

Monmonier, M. 1991. Ethics and Map Design: Six Strategies for Confronting the Traditional One-Map Solution. ***Cartographic Perspectives*** 10: 3-8.

Muehrcke, P. 1986. ***Map Use: Reading, Analysis, and Interpretation,*** Second Edition. Madison, Wisconsin: JP Publications.

Muehrcke, P. 1990. Cartography and Geographic Information Systems. ***Cartography and Geographic Information Systems*** 17(1): 7-15.

Muller, J. 1975. Associations in Choropleth Map Comparison. ***Annals of the Association of American Geographers*** 65(3):403-413.

Muller, J. 1979. Perception of Continuously Shaded Maps. ***Annals of the Association of American Geographers*** 69(2): 240-249.

Murdock, B. 1982. Recognition Memory. In Puff, C. (ed.). ***Handbook of Research Methods in Human Memory and Cognition.*** London: Academic Press: 1-26.

Nunez de la Cuevas, R. 1967. Color in Topographic Maps. ***International Yearbook of Cartography*** VII: 43-49.

Olson, J. 1972. Class Interval Systems on Maps of Observed Correlation Distributions. ***The Canadian Cartographer*** 9: 122-131.

Olson, J. 1975a. Experience and Improvement of Cartographic Communication. ***The Cartographic Journal*** 15(2): 94-108.

Olson, J. 1975b. Autocorrelation and Visual Map Complexity. ***Annals of the Association of American Geographers*** 65(2): 189-204.

Paterson, J. 1974. Writing Regional Geography. In Board, C. et al. (eds.). ***Progress in Geography*** 6. London: Edward Arnold: 1-26.

Patton, J. and P. Crawford. 1977. The Perception of Hypsometric Colors. ***Cartographic Journal*** 14(2): 115-127.

Patton, J. and SLocum, T. 1985. Spatial Pattern Recall: An Analysis of the Aesthetic Use of Color. ***Cartographica*** 22(3): 70-87.

Peterson, M. 1979. An Evaluation of Unclassed Cross-Lined Choropleth Maps. ***The American Cartographer*** 6(1): 21-37.

Peterson, M. 1985. Evaluating a Map's Image. ***The American Cartographer*** 12(1): 41-55.

Phillips, R., A. DeLucia, and N. Skelton. 1975. Some Objective Tests of the Legibility of Relief Maps. ***The Cartographic Journal*** 12: 39-46.

Rader, N. 1989. Determining Lateral Boundaries for River Conservation Areas: The Case of the Upper Delaware River. M.A. thesis, University of Washington.

Reicher, G. 1969. Perceptual Recognition as a Function of Meaningfulness of Stimulus Material. ***Journal of Experimental Psychology*** 81(2): 275-280.

Robinson, A., R. Sale, J. Morrison, and P. Muehrcke. 1984. ***Elements of Cartography,*** Fifth Edition. New York: John Wiley and Sons.

Rogers, J. and Groop, R. 1981. Regional Portrayal with Multi-Pattern Color Dot Maps. ***Cartographica*** 18(1): 51-64.

Rondinelli, D.A. 1985. ***Applied Methods of Regional Analysis: The Spatial Dimensions of Development Policy.*** Boulder, Colorado: Westview Press.

Roxby, P.M. 1925-1926. The Theory of Natural Regions. ***The Geographical Teacher*** 13: 276-382.

Sauer, C. 1925. The Morphology of Landscape. In Leighly, J. (ed.) (1974) 315-350. ***Land and Life.*** Berkeley, California: University of California Press.

Selfridge, O. 1959. Pandemonium: A Paradigm for Learning. In ***The Mechanisation of Thought Processes.*** London: H.M. Stationery Office.

Select Micro Systems, Incorporated. 1989 ***Mapmaker, Version 4.01.*** Yorktown Heights, New York: Select Micro Systems, Incorporated..

Symanski, R. and J. Newman. 1973. Formal, Functional, and Nodal Regions: Three Fallacies. ***The Professional Geographer*** 25(4): 350-352.

ThinkSpace, Incorporated. 1992. ***Map II, Version 1.5.*** London, Ontario: ThinkSpace, Incorporated.

Tufte, E. 1990. ***Envisioning Information.*** Chesire, Connecticut: Graphics Press.

Ullman, S. 1984. Visual Routines. ***Cognition*** 18: 97-159.

Unwin, D. 1981. ***Introductory Spatial Analysis.*** London: Methuen.

van der Weiden, F. and Ormeling, F. 1972. An Enquiry into the Associative Properties of Colours. ***Geografisch Tijdschrift*** 6(3): 282-289.

Warf, B. 1988. Regional Transformations, Everyday Life, and the Pacific Northwest Lumber Industry. ***Annals of the Association of American Geographers*** 78(2): 326-346.

Wilkinson, L. 1989. ***SYSTAT: The System for Statistics.*** Evanston, Illinois: SYSTAT, Incorporated.

Williams, R. 1958. Map Symbols: Equal Appearing Intervals for Printed Screens. ***Annals of the Association of American Geographers*** 48(1): 132-139.

Winters, H. 1991. Personal Interview, July 31st. East Lansing, Michigan. Referenced with permission.

Youngmann, C. 1972. Representational Accuracy in Multi-Dimensional Regionalization and Choropleth Mapping. Ph.D dissertation, University of Kansas.

Zobler, L. 1958. Decision Making in Regional Construction. ***Annals of the Association of American Geographers*** 48(2): 140-148.

Zusne, L. 1970. ***Visual Perception of Form.*** New York: Academic Press.