THE COMMUNICATIVE ACCOMPLISHMENT OF MUTUALITY DURING FATHER-SON PLAY IN EARLY CHILDHOOD

by

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ABSTRACT OF THE DISSERTATION

The Communicative Accomplishment of Mutuality During Father-Son Play in Early Childhood

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This dissertation reports a three-study investigation of mutuality within self-directed play sessions of four African-American father-son dyads at two points in time. These three studies use multiple methods for systematically analyzing face-to-face interaction occurring within a finite space, namely a play area of a daycare center, during a fixed period of time, approximately 15 minutes. This dissertation develops a systematic approach for studying mutuality as it links to well-being as a quality of every day life and individual development. This research offers communication explanations for how relationships in the early stages of life are formed and a way of thinking about well-being across psychological, cognitive, emotional, and social domains from a communication perspective.

Study 1 uses exploratory microanalytic techniques (Mokros, 2003) to identify units of decision making during father-son play. Through its in-depth and systematic examination of decision making, Study 1 provides a vocabulary for talking about decision making from a communication perspective and ultimately provides a conceptual framework and coding system for identifying features of mutuality within father-son

interaction. From insights gleaned from this first study, the research in Study 2 reports a comparative study that focuses on understanding individual differences in the amount and quality of mutuality exhibited within and across four father-son dyads at two points in time. This research concludes with Study 3, a comparative study designed to link Interaction States identified in Study 2 with Command Sequences identified by using the Dyadic Parent-Child Interaction Coding System (DPICS) (Eyeberg & Robinson, 1983).

This study contributes to communication theory and research because it examines the moment-to-moment child-rearing practices in families at risk and speaks to how through communicative practices, fathers and sons are able to construct and sustain moments of mutual focus on a task or each other and what this says about not only how relationships in the early stages of life are developed but also about well-being as a quality of everyday life and individual development.

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CHAPTER ONE

Communication, Decision Making, and Mutuality during Father-Son Play

This dissertation reports an exploratory three-study investigation of mutuality within self-directed play interactions of four African-American father-son dyads videotaped at two points in time, approximately 15 months apart. These studies explore the features of communication practices that create, sustain, and promote mutuality in decision-making processes and engagement in a task-defined activity, namely play. As a task-defined activity, play between a father and a son involve decisions related to the task itself and the relational qualities of those decisions, thereby marking father-son play as a social space where one learns to mutually coordinate actions to attain a goal.

The concept of mutuality within the child development and developmental psychology literature has been a popular and fertile area of inquiry for researchers (e.g. Deater-Deckard & O'Connor, 2000; Kochanska, 1997; Lindsey, Mize, & Pettit, 1997; Maccoby, & Martin, 1983; Maccoby, 1992). For example, research on parent-child relationships emphasizes the concept of mutuality as part of a well-functioning parent-child relationship (Kochanska, 1997; Maccoby, 1992). However, developmental researchers acknowledge that little is known about the underlying processes in the development and maintenance of parent-child mutuality and its link to family environment and children's social, emotional, and cognitive development (Harrist & Waugh, 2002).

The concept of mutuality has not been pursued to any great extent in the communication literature, particularly within the context of parent-child interaction.

Communication research on children has mostly focused on TV and media influences on children, for example video games and TV consumption. Some research has been done on children's peer acceptance and interpersonal communication skills, nurturing styles, and discipline, but this research focuses on older children, age 15 – 18 whereas this research focuses on children in their first two – four years of life. Research on young children and communication has mostly been represented by scholars in the fields of language socialization and linguistics and developmental and cognitive psychology. However, research examining children's communication has been making inroads in communication scholarship communication (Kidwell, 2005; Lerner & Zimmerman, 2003).

This dissertation argues that communicative practices are not only foundational to understanding the ways in which we are mutual with one another but also that mutuality is developed and sustained through communication. This research prioritizes the social in order to inform an understanding of the social and communicative processes that enable us to be mutual with one another. This research seeks to contribute to the dialogue within communication scholarship and cite the importance of mutuality in relation to well-being as well as the idea of well-being as a quality of every day life. Toward this end, the three studies presented in this dissertation offer a communication perspective of the ways in which we are or are not mutual in every day life and potential implications for well-being.

The Problem of Mutuality

Mutuality is balanced, reciprocal attention, and engagement with others in interaction or social encounters (Lindsey, Mize, & Pettit, 1997) and synchronized interactions (Deckard-Deater & Petrill, 2004). Most simply stated, mutuality is a state of interaction involving reciprocal focus in a shared activity. Mutuality suggests well-being because presumably one's ability to sustain a common focus, manage attention and states of arousal, regulate affect, and participate and construct coherent day-to-day interactions suggests an individual's competency with and meaningful attendance to the demands of social interaction. Mutuality links to well-being as a quality of day-to-day life and individual development as evinced in our ability to manage the allocation of our attention and meaningfully engage and attend to self, other, or tasks in moments of engagement. Mutuality in this sense is linked to a sense of psychological well-being if thought of along a continuum, namely the extent of balance or imbalance with regard to a particular activity, task, or social encounter.

A meaningful sense of self and other in interaction and subsequently an ability to meaningfully engage and respond to as well as differentiate between self and other in interaction is vital to functional relationships. Interactional engagement, namely the sustained focus and cooperation in pursuit of sustaining a common focus, is a key component of relational competency. This is key for relational competency because as Sullivan (1953) argues, there is no "self-contained person" or "individual in inviolable isolation." Rather, human existence may be understood as relational, a point also argued by Minuchin (1974,1978), Sameroff (1975), Bronfenbrenner (1979), and Mokros (1996, 2003). Manifestations of relational competency within moments of interactional engagement are evidenced in our ability to meaningfully engage and experience sustained mutual focus with a relational other or task. This ability to meaningfully engage and sustain focus on a relational other or a task has implications for mental health and mental illness and our psychological and social selves. Healthy and well-functioning psychological and social selves are reflected in communication and social interaction throughout life. An ability to meaningfully attend is critical for a psychological and social self and critical for safety and survival.

This dissertation looks at the concept of mutuality as it links to well-being as a quality of day-to-day life and individual development. Mutuality links to well-being as a quality of day-to-day life and individual development through manifestations of relational competency as we meaningfully engage and attend to self, others, or activities in moments of interactional engagement. To sustain and pursue a common focus suggests an individual's ability to manage his attention and states of arousal. That is, sustaining and pursuing a common focus without being derailed by internal or external stimuli during moments of interactional engagement with others or activities reflect an ability to manage attention and states of arousal.

Mutuality links to individual development because presumably as children develop, they should be able to cultivate competencies in their ability to attend and manage states of arousal. This ability to attend to the activities of others suggests well-being within the social domain. That is, if one is able to meaningfully attend to an other's thoughts and actions, he or she is able to manage his or her attention and appropriately match his/her behavior to the situation. Managing our attention also guides social interaction and influences how we interact with others. Mutuality suggests well-being because being mutual demands the flexibility to smoothly transition between states of attention to one's self, attention to another, or attention to a task. These transitions require the ability to regulate one's attention, affective processes, and cognitive demands. For example, within moments of focused interactional engagement between a parent and child during play, each should be able to regulate his actions to align with the other and align with the context of the interaction.

Theoretical and Practical Importance of Mutuality

The study and understanding of the ways in which individuals are mutual with one another is of theoretical and practical importance. As a theoretical concept, mutuality is important because it is a fundamental feature of enduring relationships that begin in infancy with parents and persists across our lifespan within personal relationships we create with others. Empirical studies such as this have practical relevance for informing our understanding of how communication practices sustain the accomplishment of the taken for granted routine of paying attention to one another in day-to-day interaction.

Within interaction, there are expressions of mutuality along a continuum ranging from low-mutuality to high-mutuality. That is, during any social encounter, participants' level of mutuality is continually shifting from responses to internal and external stimuli from low to high or high to low and is consequently temporally bound. Mutual states are not stable communicative events; rather participants move toward or away from states of mutuality, transitioning through varying degrees of being mutual with each other through time as the interaction unfolds. It is the management of these varying degrees of mutuality that offer insight into a parent and child's ability to attend and focus to help the other attend and focus. Mutuality is not a static state of being; there are ongoing expressions of some level of sharedness of self with a relational other. That is, mutuality is a dynamic, interactive process wherein expressions of mutuality vary moment-to-moment.

Perceptions of the Black Male

Much of the social science literature has painted a portrait of African-American males as “invisible” or barely existing (Rasheed & Rasheed, 1999; Roonparine, 2004; Smith, Krohn, Chu, Best, 2005), and this gives continued life to the perception of African-American fathers as irresponsible and uninvolved fathers (Marsiglio, 1993). Young African-American males are also portrayed as individuals who award privilege to peer-group alliances over family (Anderson, 1994). Anderson’s study of young African-American males creates an image of these men as a reckless, sexually active group who abandon parental responsibility in pursuit of opportunistic sexual relationships with women and allegiance to their group. As a result, the negative image of young African-American fathers as sexual predators who abandon their children has trickled into mainstream America’s conceptualization of the young, black male. In short, black fathers have been represented as pathological figures. Consequently, it is important to study how the underemphasized and underexplored role of involved African-American fathers contributes to the development of young black children’s sense of self and well-being.

This research focuses on how mutuality is exhibited by four African-American father-son dyads. This research examines how four fathers and sons manage the moment-to-moment orderliness and organization of play activities as they balance practical and relational demands of being together. This study focuses on how fathers and sons exhibit well-being as a quality of every life day through spending time together and making decisions about a task and about each other. It looks at African-American fathers as men who are at times able to construct moments of mutual engagement with their sons during play and at other times unable to accomplish moments of mutual engagement. Examining the attendant communicative practices and processes of fathers and sons as they link to the development and maintenance of mutuality as a social process is of interest and an important first step toward reshaping the images of African-American males as disengaged from relational responsibility.

This dissertation is a step toward moving away from the presumption of parental absenteeism among African-American males and a move toward looking at what happens when two people who happen to be African-American males are faced with a seemingly simple problem, namely how to spend time together in a situation that asks them to play together for approximately 15 minutes.

Communication

This research aims to derive a communication explanation for mutuality during moments of engagement between intimates. As previously mentioned, the intimate relationships are fathers and their sons as they pursue an every day activity such as play. In addition, this research aims to offer a communication explanation for decision-making and well-being across psychological, cognitive, emotional, and social domains of day-to-day life. Toward these ends, this dissertation adopts a constitutive view of communication and development (Mokros, 2003; Mokros & Deetz, 1996). As Mokros (2003) explains a constitutive view “takes seriously the centrality of communication for making sense of personal and social being” (p. 4).

This research is guided in part by the classic distinction between the content and relational dimensions of communication (Ruesch & Bateson, 1987; Watzlawick, Beavin, & Jackson, 1967). Within this communication framework, communication is understood to have both an informational or instrumental dimension and a relational dimension. A constitutive view of communication allows the researcher to transcend or move beyond considerations of communication as primarily having an informational or instrumental function. An informational view of communication treats communication as a medium for transferring messages from one person to another. Within an informational framework, individuals are thought to exist prior to communication and "communication is a tool by which persons, as self-contained autonomous agents, exchange conventionally defined linguistic and linguistic-like signs" (Mokros & Deetz, 1996, p. 31). An instrumental view of communication treats communication as a medium or a tool for strategic action or "getting things done."

A central strength of a constitutive view of communication is its ability to derive communication explanations that take into account human beings as cognitive, psychological, and socially embedded beings who engage in not only informational and instrumental communication practices but also in communication practices that construct a meaningful social and relational reality. A constitutive view of communication provides a way looking at the world dynamically rather than statically and to think about human existence as relational and in a state of perpetual dynamism through our ongoing adaptive and reflective communicative engagements.

The Instrumental and the Relational

Study 1 examines relational qualities of the decision-making process in terms of non-verbal and verbal actions treated as meaningful turns and contributing to decision-making processes. For example, this research looks specifically at talk related to the play (and not play) activity and takes into consideration communication practices such as questions and replies, opportunities for response, declarative statements, expressions of collaboration, cooperation, participation, and expressions of acknowledgment. This research also considers how these kinds of practices are accomplished nonverbally and how nonverbally fathers and sons organize their space and create a mutual space.

Each of these communication practices involves instrumental and relational communication. Questions and statements related to the activity at hand, queries and replies related to what the father and son will do, and the subsequent practical issues linked to the activity are instrumental activities. Relational dimensions are also reflected in talk through expressed roles and responsibilities, for example, that relate to how the activity at hand will unfold. Questions and statements relating to participation (i.e., who will do what) and the participatory roles that are subsequently invoked are prime examples. These communication practices are expressions of the father and son as cognitive, psychological, and socially embedded beings who exist in relation to each other. They are faced with an ill-defined problem - how to spend time together. They are asked to shape their time together into a defined social reality, namely play. Through communication, they engage in a mutual endeavor to get things done while attending to the relational demands of this social reality.

Outline of Dissertation

The focus of the research reported in this dissertation is how fathers and sons spend time together and how they accomplish play in the context in which they are placed. This dissertation is an exploratory three-study investigation of mutuality during father-son play. This research analyzes nine videotaped play sessions, each approximately 15 minutes in length. These videotapes were obtained from a study that examined the efficacy of a multi-week parent training program on the quality of parent-child interaction. Both paper and pencil and behavioral measures were obtained to assess the efficacy of the intervention in a pre-post test design. Parent-child dyads were recorded during play before and after the parent training sessions to gather behavioral measures. The behavioral measures were obtained through coding these play sessions using the Dyadic Parent-Child Coding System (DPICS) developed by Eyeberg and Robinson (1983). The videotaping of play sessions was carried out at daycare centers attended by each of the children. The relation of DPICS command sequence codings in relation to states of mutuality is examined in Study 3, discussed subsequently.

How a father and son spend time together is a problem of interest because it has relevance for understanding emotional, cognitive, psychological, and social development as viewed through a communication lens in this line of research. Although not directly studied, this research has relevance for our understanding of emotional, cognitive, psychological, and social development because the development and quality of these domains of existence are evident to some extent and developed through how we communicate and interact with others.

Study One Overview

Study one is an exploratory microanalytic study (Mokros, 2003) of decision making within the play interaction of a single father-son dyad at a single point in time. Its aim is to adopt an inductive approach to understanding decision making from a communicational and interactional perspective. To achieve this, this research applies the techniques of microanalysis, such as transcription and mapping the natural history of the play interaction, to identify units of decision making within a play interaction.

Decision Making as Context for Study

A father and his son are faced with an ill-defined problem: how to spend time together at play (as structured by the experimenter recording the session). That is to say, they are faced a decision-making task.

How decision making unfolds within the context of moment-to-moment father-son play interaction is examined through transcription and mapping the session. The activities of the father and son in this decision making activity are specifically examined in terms of the interplay of the content and relational dimensions of communication. Decision making units are defined as having content and relational dimensions. This dissertation will draw on the classic distinction between the content and relational dimensions of communication first developed by Gregory Bateson (1995) and introduced to the field by Watzlawick, Beavin and Jackson (1967) as one approach to conceptualizing decision making process during an ordinary activity.

Play involves decisions about what to do and how to do it. In working out these concerns, participants confront uncertainty over both content and relational aspects of how they will go about spending time together and how they play out the relational and instrumental work at hand. Of particular interest therein is how a child, seemingly on equal terms with an adult in terms of the activity at hand, gains perspective on personhood, self, and other through instrumental actions and imaginative engagement with a parent. Personhood is understood as an individual's understanding of self and other (Mokros, Mullins, & Saracevic, 1995). Mokros and colleagues suggest that ideas of self and other are always invoked in interaction such that content or information exchanges invariably involves relational positioning and consequences.

Study Two Overview

Study 2 is an extension of the research from Study 1 and reports an empirical test of individual differences by examining the differences within and across dyads over time in the extent and quality of mutuality during two videotaped sessions for each of four dyads. The videotaped sessions were roughly 15 months apart. By comparing the quality and extent of mutuality exhibited in these four dyads at these two time points, this study offers data on continuity and change across and within dyads that have relevance to developmental perspectives of the child and the parent.

The coding system of mutuality used was developed from the inquiry into decision making in Study 1. Study 1 examined how the father and son handled the task at hand through decision making about task and relational aspects of the play activity. Study 1 differentiated states of mutual engagement and qualities of mutual engagement from states of disengagement, or non-mutual activities. This study produced a conceptual framework and coding system for identifying states of mutuality during moments of engagement and their attendant activity and focus. This will be discussed in greater detail in Chapters 2 and 3. However, what was most surprising in Study 1 was the prominence of mutual engagement. There were very few instances of disengagement between the father and son. Study 2 compares mutuality and non mutuality for two other sessions for this dyad and three other dyads.

Study Three Overview

As Study 2 extended the research from Study 1, Study 3 extends the research from Study 2 and uses the same four dyads from Study 2. Study 3 aims to link DPICS actions with the states of interaction coded in Study 2 in order to relate behaviors coded using DPICS with those developed in Study 1. Specifically, Study 3 examines how behavioral codings of parent-child Command Sequences relate to codings of mutuality. The Dyadic Parent-Child Interaction Coding System (DPICS) developed by Eyeberg and Robinson (1983) is used to develop behavioral codings.

DPICS is a discourse analytic coding system. That is, it assigns functional definitions to talk and activities of the parents and child in their interaction. DPICS identifies verbal and non-verbal behaviors that are communicative and interactive in nature. Parental behaviors include commands, negative commands, critical statements, praise, acknowledgement, non-verbal expressions of positive affect, physical reprimand, namely physical negative. Child behaviors include compliance, non-compliance, no opportunity, smart talk, cry, whine, yell, and destructive actions. Many features and forms of talk are not included in the analysis through the restrictions of the type of activity coded. Nevertheless, such actions as commands and compliance involve a state of mutuality, parental responses and non-responses and child acting out behaviors can also be looked at in terms of their degree of mutuality and non-mutuality.

A general objective underlying this dissertation research is to contribute through method and data to our thinking about and conceptualization of human development and the concept of well-being as a quality of every day life in communication terms through the study of cooperation and collaboration that are basic features of social development.

An individual's ability to collaborate and cooperate, to be mutual in activity with another, and to mutually engage in decision making are aspects of everyday well-being.

Implications

Among the implications of this research is its relevance for understanding well-being as a quality of every day life. Attention and arousal are aspects of cognition that are correlated or have relationships to daily manifestations of mutuality and engagement. They are also characteristically interactive whether with an other, object, or activity. Although this study doesn't look at attention and arousal on a cognitive level, it does map the behavior that presumably correlates with differences in attention and arousal and subsequently has implications for understanding social, psychological, and neurological processes as evinced through communicative processes.

Mutuality is a taken for granted characteristic of the carrying out of routine, day-to-day interaction. Mutuality is an important concept for communication. Through qualities of mutuality that we experience a sense of connectedness and autonomy in our mutual engagement with one another that allows us to characterize communication in terms of its authenticity. Through being mutual, we glean insights into another's thoughts, wants, desires, beliefs, or actions. That is, when we meaningfully engage with an other, we begin to understand the other and those things that might make him or her happy or sad, (including one's self as an other) for example. Creating this understanding guides social interaction and influences how we act toward others. Our understanding of others frames how we understand our social world and how we behave. Expressions of mutuality bring coherence to interaction.

The study of Africa-American fathers and sons is of interest because very few studies within the field of communication and social sciences in general have actually studied this population in ordinary, routine activities. Current understandings of African-American males as fathers are stereotypic, anecdotal, and demographic in orientation. Studies of active parenting without a clinical agenda are few.

The family, and in particular fathers and sons during self-determined play, is the context for exploring mutuality as it relates to individual development and well-being. Previous research suggests that parenting practices strongly influence children's social and emotional development and their transition into functional adults (Collins, Maccoby, Steinberg, Hetherington, & Bornstein, 2000; Maccoby, 2000). The developmental course of individuals as well as the concept of well-being have been discussed in other literatures (e.g., psychology, child development, sociology, and medicine), but there exists little research on how individuals develop and the concept of well-being within the field of communication generally and family communication more specifically.

Well-being has been called a "new science" by Nobel Laureate Daniel Kahneman (1999). Kahneman approaches the study of well-being through repeated measures of moment-to-moment subjective states, such as happiness. This new science of well-being looks at a broad range of experiences in everyday life, primarily relying on subjective and sociodemographic data. Likewise, this dissertation orients to moment-to-moment repeated measures as preferable to global measures or pencil and paper measures describing experiences removed from the act of measurement. This dissertation also orients to a sense of autonomy and self. It relies on objective, observable moment-to-moment interactional data from the everyday life of fathers and sons. The use of objective, observable moment-to-moment interactional data serves as a complement to the scope of well-being research currently being conducted. This research looks at well-being as a concept of life quality and explores how communication not only shapes and reflects well-being but also how it shapes the developmental course of individuals. Mutuality is a concept of life quality because to be genuinely mutual suggests a sense of solidarity and connectedness to others. The concept of well-being itself is neither a constant nor stable state. Rather, well-being is a subjective quality state of life existing along a continuum from good to bad, such as experiences of being happy or sad, and punctuates daily human existence within situated contexts of everyday life. Despite very real and concrete objective conditions such as socioeconomic status, crime rates, physical and mental health status, and employment status that are typically referenced in relation to quality of life, well-being focuses on a subjective quality of life and truly complements these sociodemographic measures.

Previous research has convincingly shown clear links between such sociodemographic measures and the negative aspects of life as they relate to quality of life. For example, children growing up in poverty have a greater chance of developing mental and physical health problems than their counterparts not growing up in poverty (Chafel, Gold Hadley, 2001, Secombe, 2000). Until recently, few studies have attended to well-being. For example, many studies on mental health have demonstrated how poverty impacts mental health (e.g., Sampson & Lamb, 1994). There has been an abundance of studies exploring the negative aspects of daily existence (e.g., Benjamin, 1992) in the context of mental health as a key aspect of quality of life. As Kahneman, Deiner, and Schwarz (1999) point out, “textbooks that do not mention pleasure or well-being at all devote many pages to the clinical phenomena of anxiety and depression" (p. iv). Seligman and Csikszentmihalyi (2000) echo Kahneman et al. as they explain that there is an abundant knowledge-base focusing on how people survive and endure through adversity, but so far few studies document how families produce children who flourish. It is important to note, however, that well-being exists along a continuum and individuals exhibit degrees of well-being ranging from high to low and they frequently experience them together. It is in the carrying out of the everyday activities that we can begin to understand qualities of well-being and links to social, psychological, and neurological processes.

This dissertation explores how, through an ordinary activity such as play, communication is a mode of explaining the developmental course of individuals and how mutuality is reflected in interaction. Young children, specifically African-American children living at or below the poverty line in their first 2-3 years of life and their fathers, are the focus of this study. Perhaps the uniqueness of this study is that it looks at the moment-to-moment situatedness of human existence and daily life from a non-clinical perspective. There have been few studies on the moment-to-moment situatedness of the everyday interaction routines within families; instead there has been more focus in the clinical arena, specifically on the correlates of pathology in everyday interaction routines of families (e.g., Minuchin, Rosman, & Baker, 1978). Even within the clinical literature, African-American families are not well represented.

African-American families are typically featured in the literature through risk and pathology. African-American families are studied mostly through sociodemographic measures, and this research has focused on assessments of risk and remediation, with risk typically being the key focus. Independent of race and ethnicity, research examining familial influences on development focus on the role of the mother. Although work on the role of the father and social interest in the father's involvement in child development has shifted in recent decades, they are still underrepresented in research. There are few observational studies examining moment-to-moment interaction between African-American fathers and their sons.

Because of its focus on the pathological, clinical, and socially undesirable, literature focusing on African-American fathers tends to sustain the stereotype of black men as absentee fathers and uninvolved parents (Rasheed & Rasheed, 1999; Roonparine, 2004; Smith, Krohn, Chu, Best, 2005). The research reported in this dissertation focuses on African-American fathers as fathers with their children as others. Specifically, it looks at the moment-to-moment practices of being together in play or non play for 15 minutes at two different points in time.

CHAPTER TWO

METHOD

This dissertation reports three studies of father-son play based on the analysis of nine videotaped play sessions, each roughly 15 minutes in length. For each of four father-son dyads, two videotaped play sessions recorded roughly 15 months apart are examined to develop between dyad across time comparisons. The ninth videotape represents a third play session of one of the father-son dyads recorded roughly four months after the first play session. This one play session was studied first through exploratory microanalysis.

The videotapes were obtained through the Parent-Child Coding Project Gross et al. (2008, under review). The Coding Project applied a standardized parent-child interaction coding scheme known as the Dyadic Parent-Child Interaction Coding System (DPICS) (Eyeberg & Robinson, 1983) to code 633 videotaped play sessions. The play sessions were recorded on videotape under the supervision of Dr. Debbie Gross at Rush University in Chicago in the course of a federally funded study (NINR/NIH reference number 2 R01 NR004085) to test the efficacy of an 11-week parent training program. Gross was the principal investigator and Mokros was one of two research consultants who had oversight responsibility for the coding of the videotaped play sessions.

The four dyads were among 253 families participating in this research. One parent-child dyad from each family was recorded in play at four time points during the course of 15 months. All 253 families who participated in this study were economically at or below the poverty line, with 59% of the participating parents identifying themselves as African-American and 33% as Latino. Fathers accounted for only 7% of adults participating from each family while mothers accounted for nearly 90% of adults participating. Males accounted for 56% of children in the study, with all children between two to four years of age at the time of the initial videotaping. The four fathers whose videotaped play sessions with their sons were studied in the current research all self-identified as African-American.

The research reported in this dissertation was not concerned with the efficacy of parent training. This research began with an exploratory study of one videotaped play session. That study employed methods of transcription to map the interaction of one parent-child dyad during roughly 15 minutes of play. This exploratory study sought a microanalytic understanding of decision making, its units, and process as revealed through the interaction of one dyad. Based on insights gained from this exploratory study, mutuality, namely a state of interactional engagement between the members of a dyad became the focus of further research. Mutuality may be thought of as a common attending to each other or to some shared activity, namely tasks of parent-child play. Mutuality in this sense has both an activity and focus aspect.

As a state, mutuality has a duration, namely a point in time when it begins until it ends. The current research examines mutuality in face-to-face interaction occurring within a finite space (play area of a daycare center) and during a fixed period of time (15 minutes). In addition, experimenter instructions encouraged mutual involvement in the everyday sense as each parent-child dyad was asked to play with one another while being videotaped. The dyads received no other instructions. Thus, each dyad needed to decide what to do, namely how to play, with what, and for what purpose, if any.

Study 1: An exploratory microanalysis of one father-son dyad during moment-to-moment play interaction

Study 1 reports an exploratory inquiry into a seemingly simple problem, namely how an African-American father and son decide to spend time together in a situation that asks them to play together for approximately 15 minutes of unstructured play and how this is accomplished. This research uses a natural history microanalytic approach to develop an approach for studying decision making and its accomplishment during an everyday activity, namely play interaction. Through exploratory microanalytic techniques (Mokros, 2003) this research uses a single videotaped play session for identifying units of decision making between intimates, namely a father and his son, and focuses on identifying the practical and relational demands of moment-to-moment interaction. Finally, this research seeks to inform an understanding of how decision making between intimates is achieved through communicational actions. Decision making is accomplished through action. That is to say, decision making is something that is constant in interaction.

The catalyst behind this project was an interest in decision making, specifically how intimates (i.e., a family) make decisions in a real-world setting. The initial context of study was proposed as a family system making medical and health care decisions in the midst of an acute health crisis. After much consideration it became clear that a there was a more basic need for research on decision making within the domain of moment-to-moment interaction. The goal of the research shifted from studying decision making during an acute health crisis to exploring decision making during and everyday activity. Using an everyday activity as a context, this research was then able to explore how decision making in moment-to-moment interaction is organized and to provide a preliminary, empirically based vocabulary for talking about relevant issues faced by intimates involved in a decision-making activity. Therefore, the context shifted to studying parent-toddler play as a decision-making activity.

For those who have toddlers, play between their toddler and themselves is an ordinary and everyday activity. As such, it is presumably not typically viewed as an important context for the study of decision making. Yet play involves decisions about what to do and how to do it. In working out these concerns participants confront uncertainty over both the instrumental and relational aspects of how they go about spending time together, namely how they play out the relational and instrumental work at hand. Consideration of how decision making unfolds within the context of moment-to-moment toddler-parent play interaction presents language and social interaction researchers, and communication scholars more generally, a significant context for understanding the interplay of the content and relational dimensions of communication. Of particular interest therein is how a child, seemingly on equal terms with an adult in terms of the activity at hand, gains perspective on personhood, self and other through instrumental actions and imaginative engagement with a parent.

This exploratory study examined a single dyad at play over the course of 15 plus minutes not so much to understand play but to develop an inductive perspective on decision making. It approached this through a microanalysis, involving transcription of verbal and nonverbal actions of participants so as to preserve the sequential unfolding of interaction through time. As discussed by Mokros (2003) and discussed in more detail in the upcoming section, the transcripts developed may be thought of as maps whose features are revealed analytically. Thus, exploratory study of decision making as evinced within the course of play through microanalytic method, demands that one identify what a unit of decision making is and how such units are organized in relationship to one another. The question driving this research is:

RQ1: What are identifiable units of decision making identified for this dyad?

Procedure

The following section outlines how studying decision making during an everyday activity was approached. The first approach is the natural history method. This approach maps the interaction in terms of verbal and nonverbal activity. Second, through interpretive microanalysis units of decision making are identified. Third, father-son play is coded by applying the coding system developed for mutuality. Each approach is discussed in the upcoming sections.

The Natural History Approach

The natural history approach to the study of communication was developed by Gregory Bateson and his colleagues in a collaborative work called The Natural History of an Interview (McQuown, 1971). This approach was further developed by Duncan and Fiske (1977) and Duncan, Fiske, Denny, Kanki, and Mokros (1985) who referred to their extension as the structural approach to the study of interaction and extended further by Mokros in what he called interpretive microanalysis (2003).

The natural history approach makes possible the study communication at the level of interaction and makes possible insight into the linear organization and moves involved in the flow of everyday activities. The natural history approach is concerned with mapping communication as it occurs in both the verbal and nonverbal aspects of communication. This includes transcribing father-son talk, co-occurrence of talk and silences, actions, and their orientation in space. This yields a history of the play session making possible a database for studying the organization and structure of interaction.

Transcription

Talk was transcribed using Standard English orthography. As mentioned above, silences, actions, and spatial orientation were also captured. The transcript positions each turn at talk by both participants relative to each other noting onset and offset. This then preserves stretches of talk and silence during the interaction. The father's and son's actions and spatial orientation were then transcribed, with onsets and offsets coordinated with the talk. This transcription provides a map of the sequential unfolding of the father's and son's actions through time.

Interpretive Microanalysis

Mapping the natural history of the father-son play interaction created an analytic space in which to systematically and inductively identify units of decision making during moment-to-moment interaction. Keystones of interpretive microanalysis include preserving interaction-based activities, systematic analysis of the preserved records, and interpretation coupled with exploration of alternative possibilities (Mokros, 2003); (i.e., "counterfactuals") (Scheff, 1990). Preserved records typically include one or more of the following: videotapes; audiotapes; or transcripts.

Working with preserved records avoids potentially inaccurate or biased accounts of what occurred during interaction and alleviates the need to rely on memorial data and reconstructed memorial accounts of interaction (Bartlett, 1932). In other words, microanalysis allows for a description of what happened rather than a summary of one's experiences. A microanalytic approach to studying interaction recognizes the difficulties involved in accurately representing what happens when people interact and represents one way to systematically understand the natural history of "what happens when two people interact" (Bateson, 1996).

The value of working with preserved records of interaction is derived from repeated viewings and readings of the interaction to break it down into smaller interactional units to understand the organization, structure, and coordination of activity. This allows the researcher to structurally locate what is there rather than coming to the data with preconceived ideas.

Once the structure of "what is there" is uncovered, the next step phase of microanalysis is interpretive, its "aim is to consider *what happened* within a framework of what might have happened" (Mokros, Mullins, Saracevic, 1995, p. 242) [italics the authors]. This interpretation of what might have happened makes relevant the context of the interaction and the work of Bateson (1996). The specific techniques of microanalysis applied in this research include generating unitizing and analyzing sequences and patterns within interaction.

Study 1: Summary of the Case, Making Tallville

At the outset of the play session, the father and son are faced with a seemingly simple problem, namely how to spend time together in a situation that asks them to play together for approximately 15 minutes. When the father and son first appear on camera, the father is seated on a bench along the wall and the son, immediately to his father's right, is standing around a small, square table approximately waist high in reference to the child's height. Out of view from the camera is a bucket of legos sitting on the floor between the pair (to the father's right and the son's left) and a stool that is behind the son and to his right. Already on the table is a large, flat lego board that functions as a space to add legos. When the father and son initially appear on camera, the son is already playing with legos.

For the majority of the play session, the father and son maintain their original positions. There are few instances when this configuration is broken. The first notable instance occurs when the son leaves the table to get a small stool located behind him to sit on. During this time, the son has shifted his locus of attention away from the table, the activity, and his father. The next notable instances occur when the son walks the perimeter of the table. During these moments, however, the table, the activity, and his father remain the locus of his attention despite the temporary re-configuration of the common space. During this play session, the child also retreats to the bucket of building blocks on the floor between his father and him. These acts are linked to and expansions of the common space the father and son collaboratively construct.

Identifying Units of Decision Making

Because this exploratory research is concerned with identifying units of decision making, the next phase of the research applied the techniques of interpretive microanalysis and focused on reviewing the transcript and multiple viewings of the father and son's play interaction to identifying those units. Specifically, this involved repeated viewings of the map to capture the "birth and subsequent demise" (Mokros, 2003, p. 16), or the onset/offset identified units.

To answer the question: What are identifiable units of decision making identified for this dyad? I unitized decisions into task and non-task focused units. This process was guided by the classic distinction between the content and relational dimensions of communication first developed by Bateson (1955) and introduced into the field of communication by Watzlawick, Beavin, and Jackson (1967). This is one approach to conceptualizing decision making processes in interaction and a productive approach for talking about decision making within play interaction because play involves decisions about what to do, how to do it, and who will do it. Within play, content and relational dimensions of communication are represented in the practical demands of play (content) – what to do and how to do it – and in the relational demands of play – who will do it.

The content dimension of communication focuses on what the father and son are saying and is linked with a task-orientation, namely the practical demands of a play activity. Content talk focuses on propositional talk or speech acts about the play activity itself, relates directly to the task at hand, and reflects the practical demands of a play activity. Task-oriented decision-making units reflect primarily the tangible and practical decisions that make possible reducing the dilemma of ambiguity. Relational talk focuses on expressions of autonomy and solidarity, and performance and expectations related to individual roles. Additionally, the relational dimension of task units also focus on non-verbal expressions such as spatial configuration, shared attention in relation to activity, and properties of collaboration. This research acknowledges that all talk carries with it information content as well statements about the relationship (Ruesch & Bateson, 1987; Watzlawick, Beavin, & Jackson, 1967). The content/relational distinction "comes alive" only through repeated study of the decision-making map developed in Study 1.

The initial review of the map of father-son play revealed units that had a task-oriented focus. Subsequent reviews of the map of father-son decision making revealed that task-focused units were actually bi-dimensional, with a focus on either the practical aspects of the activity or the relational aspects of the activity. Within task units, two dimensions emerged: practical and relational.

Units of decision making identified as being task-oriented were those that could be reasonably associated with practical aspects of an activity. For example, these units focused on goal identification and goal specificity, procedural logic and planning, available resources, and design. Units of decision making identified as being relational were those that could be reasonably associated with the relational demands of an activity. For example, these units focused on participation, collaboration, and cooperation were identified as relational-oriented units.

The review of the map of father-son play also revealed another unit of decision making, namely non-task oriented decisions. Non-task units were those that could be reasonably associated with acts not directly related to the activity at hand. For example, these units focused on empathy/empathic displays, intimacy/sharing each other's inner world, creative play, and getting to know you talk. In sum, this approach yielded two units of decision making, namely task and non-task units.

Applying the Coding System for Mutuality

One outcome of Study 1 was the development of a conceptual framework and coding system for mutuality (This is discussed in detail in Chapter 3). This section documents the process through which the approach to coding mutuality was applied to eight additional videotaped interactions.

Identifying Mutual States by Activity and Focus

The coding system developed for mutuality in Study 1 is a state-based system. That is, it identifies Mutual and Non-Mutual states. When Mutual States are further defined by Activity and Focus, they are referred to as Interaction States. Non Mutual States are not further differentiated. The Mutual States identify units of Activity (play or not play) and Focus (task or relational) with a specific point of onset and offset. These units are defined by the continuance of a state of Activity and Focus from onset to offset to form an Interaction State. That is, each state equals one unit.

For example, a father and son are at a fast food restaurant. They are seated in a booth, each with his own lunch. At times they eat, at times they talk, at times they do nothing, and at times they watch each other. Each of these activities may be thought of as a state. When they share in an activity that requires both to participate, such as talk, they are in a state of mutuality. When the child notices someone enter and stops listening as the father continues to talk (without monitoring his son), they are non-mutual.

As used in this study, a unit of interaction is a “structural building block” (Duncan, Fiske, Denny, Kanki, & Mokros, 1985, p. 44) for father-son play, and each unit of interaction has a “birth and subsequent demise” (Mokros, 2003, p. 16). That is, each unit has an onset and offset, a point time where it begins and a point in time where it ends. The building blocks, or units, used in this study are Interaction States, and these Interaction States are bound by their onset and offset, where they begin and where they end during the stream of interaction. The state-based system used in this study locates Mutual and Non-Mutual states. One unit is comprised of three characteristics, namely State, Activity, and Focus:

1. *State:* Mutual – Not Mutual
2. *Activity:* Play – Not Play
3. *Focus:* Task – Relational (the term ‘relational’ implies ‘not task’)

This dissertation is only concerned with Mutual States, therefore *only these states* are defined by Activity and Focus. Non Mutual States are not further elaborated on. For example, within a Mutual State, a father and son could be engaged in an Activity (e.g., play), and within play a father and son could have a Focus (e.g., task). As mentioned earlier, when Mutual States are defined by Activity and Focus they are referred to as Interaction States. So, one Interaction State could be identified as play-task. This coding system yields five possible Interaction States. The first four are Mutual States that involve reciprocity in interaction:

1. Play Task (PT)
2. Play Relational (PR)
3. Task (T)
4. Relational (R)
5. Non-mutual (Ø)

Examples of Interaction States

The following examples are not an exhaustive list of all possibilities but rather exemplars to provide an understanding of how father-son actions were identified as a particular Interaction State.

Play Task State (PT)

A state of father-son play interaction focused on the practical demands of the task at hand (e.g., creating a building out plastic interlocking blocks or putting together a puzzle).

Play Relational State (PR)

A state of father-son play interaction focused on the relational demands of the task at hand (e.g., roles related to play activity, who will oversee building construction, and who will supervise its construction).

Non Play Task State (T)

A state of father-son interaction whose focus is instrumental (e.g., dad asks child to tie shoes; kid asks when will mom be home).

Non Play Relational (R)

A state of father-son interaction focusing on relational concerns (e.g., Father: do you need to go to the bathroom?; father helps child wipe his nose or adjust his socks and shoes).

Non Mutual State (Ø)

A state where father and son are not interacting with each other (e.g., father answers and speaks on cell phone; son attends to noises from other room, looking in its direction).

Interaction States will be discussed as play task (PT), play relational (PR), non play task (T), and non play relational (R) throughout this dissertation.

Data Generation – Phase 1

The first step of this research was to develop an approach for mapping fathers and sons' play interactions. There were three steps to this process: First, for each of the videotaped play interactions, Mutual and Non-Mutual States were identified. The onset and offset of each state was noted because as a state, Mutuality has a duration, a moment where it begins and a moment where it ends. Second, for each of the nine videotaped play interactions, *Activity* (play or not play) was identified *within* Mutual States only. That is, once a state of mutuality was identified, a judgment of play or not play within the Mutual State was made. Within the Mutual State, the onset and offset of the Activity was noted. The Activity does not necessarily have the same duration as the Mutual State. Third, for each of the videotaped play interactions, the *Focus* was identified *within* the *Activity*. That is, once the Activity (play or not play) was identified, a judgment of task or relational within the Activity State was made. Within the Activity State, the Focus does not necessarily have the same duration. That is, the duration of State, Activity, and Focus can and do vary.

For each dyad, this yielded a natural history of the play interaction (Appendix A). Figure 2.1 is an example of the natural history of the play interaction for the single father-son dyad examined in Study 1.

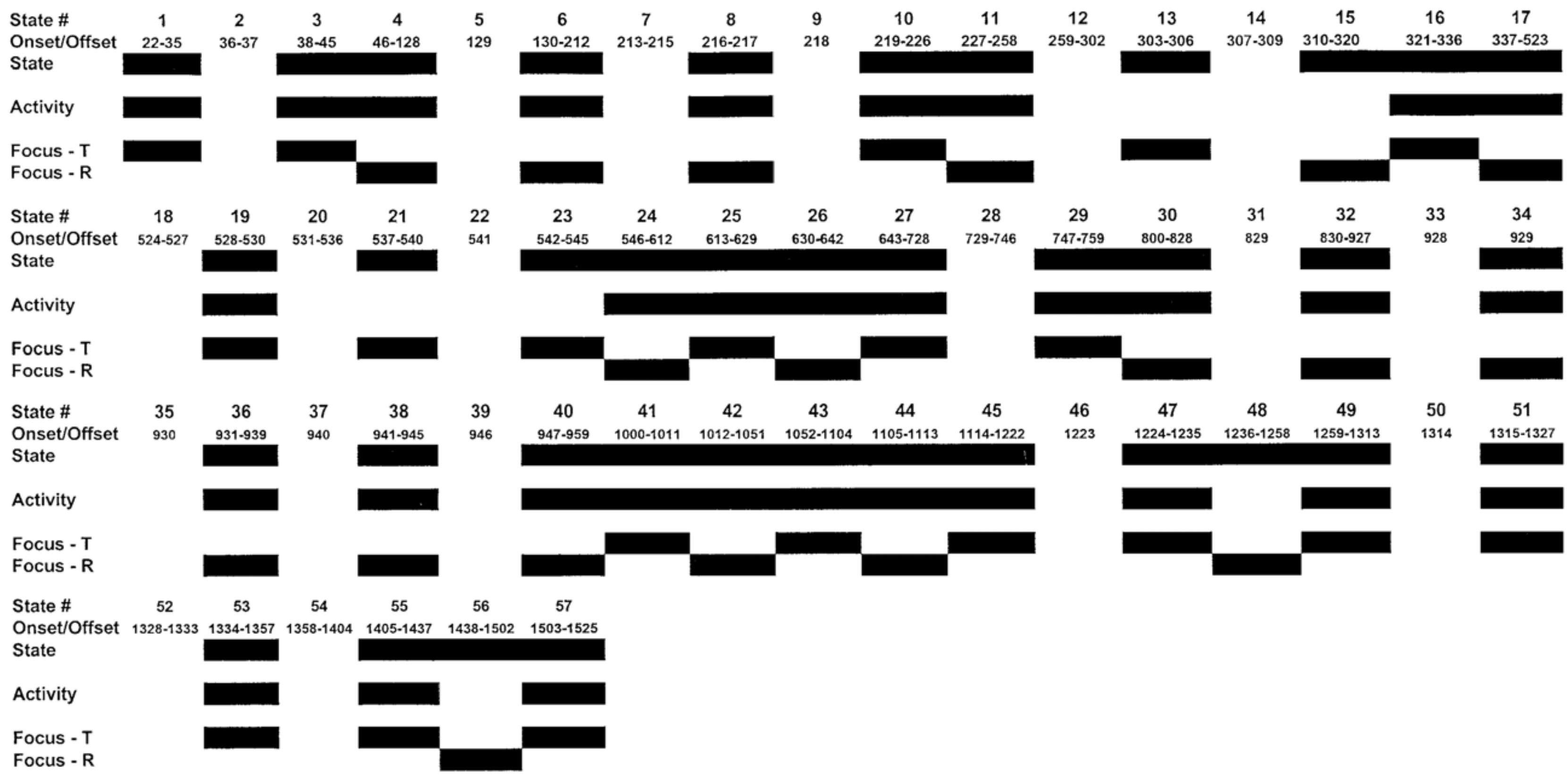
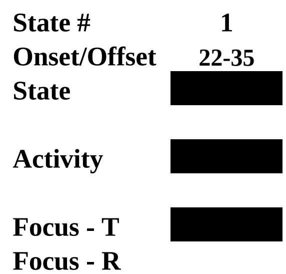


Figure 2.1. *Interaction Map of a Single Father-Son Play Interaction from Study 1.*

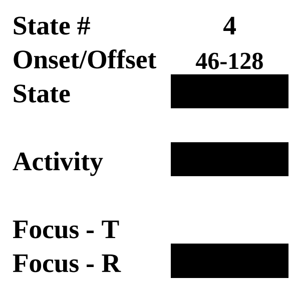
Figure 2.1 shows 57 interaction states. Shaded areas in the state row represent a mutual state. The stretches not shaded represent non mutuality. Similarly, in the activity row, shaded areas identify stretches of play. Those not shaded identify not play. In the focus row, the corresponding focus, task or relational, is shaded.

Reading Figure 2.1

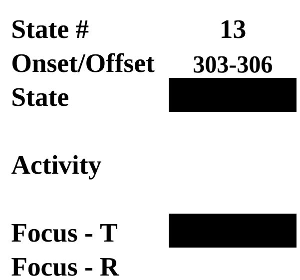
State 1 is an example of a *Play Task State:*



State 4 is an example of a *Play Relational State:*



State 13 is an example of a *Task State*:



State 15 is an example of a *Relational State*:

State #	**15**
Onset/Offset	**310-320**
State	[redacted]
Activity	
Focus - T	
Focus - R	[redacted]

Sequential Analysis

The final approach used in Study 1 is sequential analysis. Sequential analysis is a methodological approach for analyzing behavior and is typically used concomitantly with questions concerning how behavior functions in ongoing interaction (Bakeman & Gottman, 1997). This method was developed by Sackett (1979) as an approach for identifying contingency or dependency between and among animals or individuals who interact. Sequential analysis allows the researcher to study interaction as a dynamic process that has a natural history that unfolds sequentially through time. The two goals of sequential analysis are discovering stochastic patterns within the data and assessing the impact of contextual or explanatory variables on sequential structure (Gottman & Roy, 1997). Sequential Analysis is used in this exploratory study to provide another look at how this single father and son relate to each other and transition through different states of mutuality.

Generating Sequential Data

Generating sequential data involves three steps: 1) applying a coding system to a particular interaction, 2) creating a sequential diagram mapping the sequence in which units were coded, and 3) creating a transitional matrix that displays the number of times a particular transition occurred. Each step is discussed in detail below using hypothetical data.

Sequential analysis derives data from first applying a coding system to an interaction that lasted some length of time. Once the interaction is coded, the second step is listing the order in which each unit captured by the coding system was coded. This serves as a sequential diagram. For example, imagine a coding system that had three codes, A – C, and these three codes were coded in the following sequence:

A → C → A → B → C → B → C → A → C → A → B → C → B → C

F(A) = 4; f(B) = 4; f(C) = 6

The arrows immediately following the unit ID (A, B, C) point to the unit that immediately followed. The first code was A, next was a C followed by an A, etc. The numbers below the diagram indicate the number of times each unit was coded. For example, an A unit was coded four times, a B unit was coded four times, and a C unit was coded six times, yielding 14 units coded.

The third and final step to generating sequential data is creating a transitional matrix, or table that displays the number of times a particular transition from unit to another unit occurred. This matrix is developed from the sequential diagram above.

Example of Transitional Matrix

		Follows			
		A	**B**	**C**	
Precedes	**A**	X	2	2	4
	B	0	X	4	4
	C	3	2	X	5

The rows are the states that precede and the columns are the states that follow. Looking at example above, one observes that an A state preceded a B state two times, and a C state two times. This means that an A state was a preceder four times (this is explained in greater detail in Chapter 3).

Summary – Procedure Study 1

Study 1 is reports an exploratory microanalytic inquiry into decision making in a single African-American father-son dyad during roughly 15 minutes of unstructured play. Through the techniques of microanalysis, namely transcription and mapping the natural history of the play interaction, this research developed interactional criteria for identifying units of decision making during an everyday activity. This research began with a transcript of father-son play, capturing the onset/offset and co-occurrence of talk and silences as well as the dyad's actions, and orientation in space. This transcript mapped the natural history of the play session. This research was guide by the work of Kendon (1990) on which discusses how we spatially orient to each other and construct and maintain common interactive space (see also Stephenson, 2003). Guided by the classic content and relational dimensions of communication (Ruesch & Bateson, 1987; Watzlawick, Beavin, & Jackson, 1967), units of decision making were organized into task- and non-task units. Task units were bi-dimensional, having both a practical and relational focus whereas non-task units were uni-dimensional having only a relational focus. . Finally, once units of decision making were identified, the coding system for mutuality was applied to the father-son play interaction used in this research to perform a sequential analysis of mutual interaction states.

Study 2 – Mutuality in Father-Son Play Interaction Within and Across Four Dyads at Two Points in Time

Study 2 extends the research from Study 1 and reports an empirical study of mutuality within father-son play. Specifically, this research is a comparison of mutuality within and across four African-American father-son dyads videotaped during roughly 15 minutes of unstructured play at two points in time, roughly 15 months apart, yielding eight videotaped play sessions.

As introduced in chapter 1, mutuality refers to the balanced reciprocal attention and engagement with others in interaction (Lindsey, Mize, & Pettit, 1997). That is, mutuality is a state of focused interactional engagement where there is joint attention to a task or an Other. This research builds on the findings from study 1, namely the inductive discovery of interactional criteria for identifying characteristics of mutuality. That is, this study applies the state-based coding system developed in study 1 to locate expressions of and the activity and focus of mutuality within parent-toddler unstructured play sessions.

The questions driving this research are:

RQ 1: Do dyads significantly differ in the overall Mutuality? States? Activity? Focus?

RQ 2: Does the quality of mutuality vary between Dyads? Time independent of dyads, and Within dyads by time?

Procedure

Data Generation – Phase 1

Study 2 applies the coding system for mutuality discussed in detail in the previous section. Each of the eight father-son play interactions were coded using the conceptual framework and coding system developed in Study 1.This section provides a brief review of the process outlined in Study 1. There are four Mutual States defined by Activity and Focus and Non-Mutual States are not further elaborated. The Interaction States of interest are:

1. Play Task (PT)
2. Play Relational (PR)
3. Task (T)
4. Relational (R)
5. Non-mutual (Ø)

Once each of the eight play interactions in Study 2 were coded, the first step of this research was to create Interaction Maps for each play interaction (Appendix A). This process was detailed in Study 1 and is briefly reviewed here. The first step of this three-step process was to identify the onset and offset of Mutual and Non-Mutual States for each dyad across the eight play sessions. The second step of this process identified the Activity (play/not play) of each Mutual State. The third and final step of this process identified the Focus (task/relational) of Activity States. For each dyad, this yielded a natural history of the play interaction.

Data Generation – Phase 2

Once the eight-father son play sessions were mapped, the next phase of this research was to derive frequency counts and compute proportions. First, for each of the four dyads, the amount of time spent in a Mutual or Non-Mutual State was computed and proportions computed. Second, frequencies of Interaction States (Mutual State defined by Activity and Focus) were tallied and proportions computed for both play sessions and then entered into tables for analysis. These frequencies and proportions were the raw data for analysis.

Summary - Procedure Study 2

To review, Study 2 is a comparative study of 4 African American father-son dyads videotaped during 15 minutes of interaction. This research applies the coding scheme developed for mutuality in Study 1 to identify Mutual and Non-Mutual States. Mutual States were then further elaborated on by Activity and Focus. The natural history for each of the eight interactions was mapped. That is, Interaction Maps were created for each play session. The amount of time spent in a Mutual or Non-Mutual State was totaled and proportions computed. Finally, Interaction States (Mutual States defined by Activity and Focus) were totaled and proportions computed.

Study 3 –Comparison of Mutuality Across and Within Four Dyads at Two Points in Time Using the Dyadic Parent-Child Interaction Coding System

Study 3 reports an across and within dyad comparison of the Dyadic Parent-Child Interaction Coding System (DPICS) developed by Eyeberg and Robinson (1983). This study examines the relationship between the DPICS coding system and the coding system for mutuality developed in Study 1. That is, this study examines how DPICS coding links to mutuality. DPICS is a discourse analytic coding system used to code units of parent-child talk and pursuant activities during play interaction. That is, DPICS classifies talk and actions in functional terms. Unlike the state-based coding system used in Study 2, DPICS captures events. The units of parent-child talk and activities are events that punctuate the stream of interaction.

The DPICS system codes father-son play in five-minute segments. There are 3 five-minute segments for each father-son play interaction. To determine correlation between the two coding schemes used in this research, Study 3 linked the captured DPICS Command Sequences with previously identified states of mutuality from Study 2. (A command sequence is comprised of a father's spoken command to his son and the son's subsequent response of compliance, non compliance, and no opportunity. See Appendix B for definitions.) Command Sequences were used explore the relationship between how the DPICS coding captures the structure of mutuality with that of how study 2's coding captures the structure of mutuality. The questions driving this research are:

RQ 1: How do DPICS Command Sequences distribute across Interaction States? To put another way, are DPICS codings non randomly associated with qualities of Mutual States as identified through specific forms of Activity and Focus?

RQ2: What can we gain from this comparative study that helps us understand differences in how fathers and sons are mutual with one another?

Procedure

Phase 1- Data Generation

First, each of the eight father-son play interactions from study 2 (4 dyads videotaped at two points in time) was coded using the Dyadic Parent-Child Interaction Coding System (DPICS) developed by Eyeberg and Robinson (1983). Codes in this system are mutually exclusive in that only one code from the coding scheme can be applied to one event. That is, only one code could be used to identify a singular action. All available DPICS categories in the manual were not used. The larger study from which this dissertation derives its data used only 17 of the available 31 events and this dissertation follows in kind (viz.Gross, et. al, 2008). Table 2.1 lists the DPICS codes used for this phase of data generation in this study.

Table 2.1

List of DPICS Event Coded During Father-Son Play Interactions

DPICS Events	
• Critical Statement	• No Opportunity
• Encouragement	• Positive Affect
• Labeled Praise	• Positive Physical
• Unlabeled Praise	• Negative Physical
• Acknowledgment	• Smart Talk
• Command	• Destructive
• Negative Command	• Cry/Whine/Yell
• Compliance	• Physical Negative
• Non-compliance	

The coding sheet in Figure 2.2 is an example of the coding sheet used in the DPICS system. The targeted events are listed along the left-hand column. Across the top of sheet are numbered columns. These numbered columns reflect the order in which a particular event occurred. The shaded rows indicate at what time each behavior occurred. For example, the column labeled “1” identifies one event, namely a command, onsetting at 22 seconds.

SHEET # 1/2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Dyad 1																				
Critical Statement-P																				
Encouragement-P																				
Labeled Praise-P																				
Unlabeled Praise-P																				
Acknowledgement-P														X				X	X	
TIMELINE														111				130	141	
Command-P	X		X			X		X		X		X				X				X
Negative Command-P																				
Compliance-C					X		X		X		X						X			
Non-Compliance-C		X																		
No Opportunity-C													X							
TIMELINE	22	27	31		32	34	35	39	43	46	47	50	53			123	12 5			146
Positive Affect-P															X					
Positive Physical-P																				
Negative Physical-P																				
TIMELINE															12 2					
Smart Talk-C				X																
Cry/Whine/Yell-C																				
Destructive-C																				
Physical Negative-C																				
TIMELINE				315																

Figure 2.2. Example of Coding Sheet used in the Dyadic Parent-Child Interaction Coding System.

Once all dyads were coded using the DPICS system, it became apparent that Command Sequences (command followed by compliance, non compliance, or no opportunity) were the most prominent DPICS events captured across all dyads, and the decision was made to only analyze Command Sequences as they link to mutuality. Command Sequences were selected because in addition to being the most prominent, they represent an interactional unit whose possible association with specific Interaction States has potential relevance for better understanding these types States.

Frequency counts and proportions of Command Sequences were computed for each dyad. Once all Command Sequences were tallied, the next phase in this research was to link the DPICS Command Sequences with the Interaction States in Study 2.

Phase 2- Data Preparation: Mapping the Play Sessions

The second phase of this study linked the coded DPICS Command Sequences to the Interaction States identified in Study 2. Once all DPICS Command Sequences were mapped to their corresponding Interaction States (Mutual States defined by Activity and Focus) from Study 2, frequency counts for DPICS Command Sequences and their corresponding Interaction States were tallied for each dyad. That is, DPICS Command Sequences and Interaction States were correlated using time stamp data. The DPICS coding sheets captured onset times for each Command Sequence coded. The coding system for mutuality also used to time stamps to identify the onset and offset of Interaction States. Using the Interaction Maps created in Study 2, these Command Sequences were then mapped to the Interaction State in which they occurred.

Figure 2.3 is an example of how these data were mapped. The map in Figure 2.3 is an excerpt of the first five minutes of DPICS coding for Dyad 1 during Time 1 and displays how DPICS Command Sequences were linked to Interaction States.

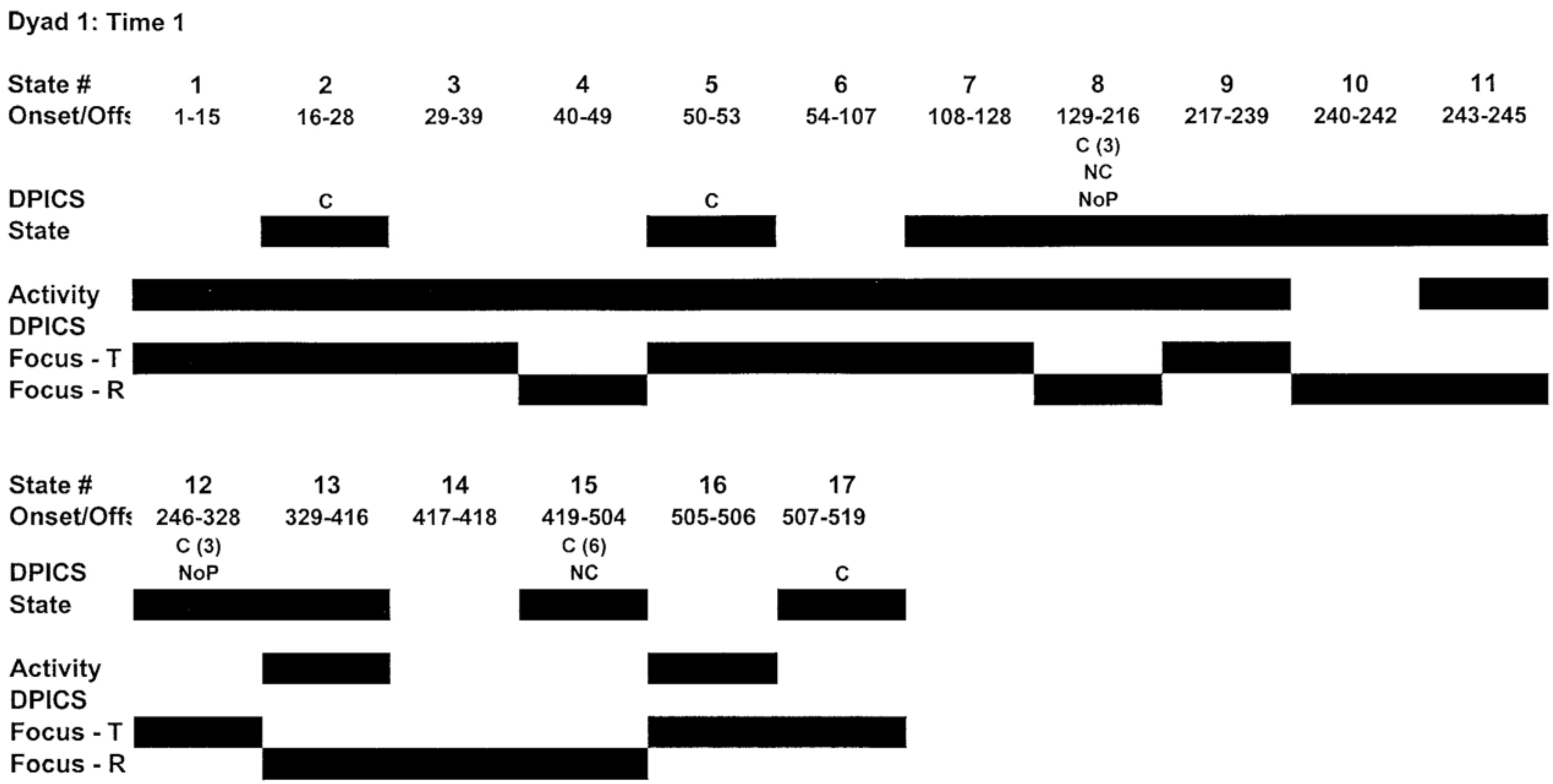


Figure 2.3. A Map of DPICS Events Linked to Interaction States.

Reading Figure 2.3

Figure 2.3 above shows how DPICS Command Sequences link to Interaction States (Mutual State defined by Activity and Focus) during the first five minutes of play for Dyad 1 during Time 1. In Figure 2.3, the unit numbers atop each column designate an Interaction State. During the first five minutes of play, there were 15 Interaction States coded. Command Sequences and 18 Command Sequences distributed across them. Maps were created for all nine interactions, namely the interaction examined in Study 1 and the eight interactions examined in Study 2 (Appendix C).

In the DPICS row, the corresponding DPICS command sequence is listed. DPICS Command Sequences were abbreviated to conserve space. Each map contains a legend with the complete list of abbreviations (C = Compliance, NC = Non Compliance, and NoP = No Opportunity). Shading in the state row identifies mutuality and no shading indicates non mutuality. Shading in the activity row identifies play and no shading identifies non play. In the focus row, the corresponding focus is shaded. When the ‘T’ row is shaded, this indicates it was a task focus and when the ‘R’ is shaded, this indicates it was a relational focus.

Example 1

State 2 is a PT State that onset at 16 seconds and offset at 28 seconds. During this stretch of time, one DPICS compliance event was coded.

State #	**2**
Onset/Offset	**16-28**
DPICS	**C**
State	
Activity	
Focus - T	
Focus - R	

Example 2

State 8 is a PR State that onset at 1:29 and offset at 2:16. During this Interaction State, five DPICS Command Sequences were coded, namely three instances of compliance (C), one instance of Non compliance (NC), and one instance No opportunity (NoP). The parenthetical numbers following each abbreviation indicate the number of times each event was coding within that particular interaction unit. Command Sequences not followed by a parenthetical number indicate one occurrence.

State #	**8**
Onset/Offset	**129-216**
DPICS	**C (3)** **NC** **NoP**
State	
Activity	
Focus - T	
Focus - R	

Summary - Procedure Study 3

To review, Study 3 explores how the state-based coding system for mutuality applied in study 2 compares to the event-based DPICS coding system. The first phase of this research involved coding each of the eight father-son play interactions examined in Study 2 using the DPICS coding system and tallying frequencies and proportions of Command Sequences. Command Sequences were used because they were the most prominent DPICS events coded.

The second phase of this research used time-stamped data to link the DPICS events to the Interaction States identified in Study 2. This procedure produced Interaction Maps that show how DPICS Command Sequences link to Interaction States.

Data Analysis

Approaches to Analysis

The data in Studies 2 and 3are categorical data. Categorical data represent frequencies of observed phenomena that were assigned to various sets of well-defined mutually exclusive and exhaustive categories (Williams & Monge, 2001). Log-linear methods will be used to analyze these data. Log linear methods have been developed so categorical data modeling can be realized. In addition frequency, proportions, and odds/odds ratios will be reported. This section discusses these various approaches and their efficacy for answering the questions this research poses.

Approach 1 – Odds and Odds Ratio

Odds and odds ratio was used to examine the variation in the extent and quality of mutuality within and across dyads through time. The odds represent the likelihood of *X* occurring in relation to the likelihood of *X* not occurring, where X defines a category of interest coded across N units.

The odds ratio is the likelihood of *X* event occurring conditioned on the occurrence of *X* event occurring. In the context of this research, the odds ratio is the likelihood of *X* cases being in a particular category divided by the number of units in the remaining cells in the same row or column (Grimm & Yarnold, 2001). The odds ratio is also calculated within and across dyads through time by dividing the odds of *X* cases appearing in a particular category at Time 2 by the odds of *X* cases appearing in a particular category at Time 1.

Odds and odds ratio is an appropriate choice because this research uses frequency data generated across mutually exclusive and exhaustive categories. That is, this research uses summary data across multiple and distinct categories. In order to manage the inter-dyad variation, odds for each unit were calculated within each dyad so that sensible comparisons could be made within and across dyads. Knoke and Burke (1980) explain that "odds is the basic form of the variation to be explained" (p. 9). Simply stated, odds is the ratio of being in one category compared to the frequency of not being in that category.

Approach 2 – Log Linear Analysis

Log linear analysis is used to explore associations between and among variables in cross-classification table as a function of a set of parameters (Grimm & Yarnold, 2001; Knoke & Burke, 1980). This research uses frequency counts of the presence of actions (Interaction sStates and DPICS events) within mutually exclusive and exhaustive categories. These counts are represented in cross-classification tables. Decisions regarding the best fitting model are based on the variation between expected and observed frequencies within cells of the contingency table.

Mokros (1984) explains that the purpose of log-linear analysis "is to account for non-random variation in cell frequencies within multi-dimensional contingency tables (p. 34). To accomplish this, log-linear analysis builds models to identify which model is the most parsimonious model to fit the data. Models are built using parameters. Parameters are merely the variables the research is investigating.

Log-linear analysis has saturated and non-saturated models. The saturated model is the most complex model because it contains all the possible effect parameters (variables). Non-saturated models remove parameters until the most parsimonious model is found. The least complex model that fits the data will have expected cell values that do not significantly differ from the observed cell counts, used in a chi-square test.

CHAPTER THREE

Study 1 – An exploratory microanalysis of one father-son dyad during moment-to-moment play interaction

Study 1 was concerned with identifying units of decision making and the interactional characteristics and processes revealed through microanalytic study of a singular father-son dyad during play. This study reports an exploratory microanalysis of decision making within a single father-son play interaction. Study 1 offers an inductive approach for identifying units of decision making between intimates and understanding decision making from a communication perspective. This study yielded five noteworthy finding: 1) the father and son shuttle back and forth between the practical and relational demands of play, attending to the task and each other, 2) the father and son created and used a singular space, and for the majority of the play session (<13 minutes) maintain their original positions with only minor variations; 3) the father and son maintained a singular, coherent, focused activity for the entirety of their play session resulting in the youngster's empathic display and his meaningful distinction between self and Other within interaction, 4) the development of a conceptual framework and coding system for identifying interactional criteria for mutuality within intimate relationships, and 5) the sequential patterning of mutuality within a single father-son dyad and the dominant states, namely PT, PR, and Ø. While each of these findings are noteworthy, the fourth finding, the conceptual framework and coding system for mutuality, is of particular interest because it took this research in an unanticipated direction and offered a new perspective for understanding the nuances of the interactional terrain in intimate relationships.

This section begins with a discussion of each of the three findings that lead up to the coding scheme for mutuality and ends with a discussion of the coding system and the sequential patterning of mutuality within this single dyad.

Finding 1 – Units of Decision Making

Task-Oriented Decisions

Decisions were unitized into task and non-task units. As previously discussed, this process was guided by the content and relational dimensions of communication (Ruesch & Bateson, 1987; Watzlawick, Beavin, & Jackson, 1967). Task units were bi-dimensional, reflecting both the practical demands and the relational demands of the activity at hand. Non-task units were uni-dimensional, reflecting decisions that did not link directly to the activity at hand. Table 3.1 lists the decision-making units within the larger task and non-task units.

Table 3.1

Practical and Relational Decision-Making Units and Non-Task Decision-Making Units

Task Units	
Task-Practical	Task-Relational
▪ Goal identification and goal specificity	▪ Participation
▪ Procedural logic and planning	▪ Collaboration
▪ Available resources	▪ Cooperation
▪ Design features	
Non-Task Units	
▪ Empathy/Empathic Displays	
▪ Getting to know you talk	
▪ Sharing each other's inner world	

At the outset of their play session, the father and son are faced with a seemingly simple problem, namely how to spend time together in a situation that asks them to play together for roughly 15 minutes. As they move through their play session, they make a series of decisions about what to do, how to do it, and who will do it. That is, throughout the 15 minutes of self-determined play, the father and son moved between decisions regarding the activity at hand and decisions regarding their relationship.

Practical Demands of Making Tallville

The play session opens with the following sequence in which the father makes a move toward identifying a goal. That is, the father wants to know what projected outcome his son envisions. The arrow next to each line identify where this occurs in the extract.

Extract 1

1. → DAD: what are you making
2. SON: [shrugs]
3. →DAD: you have to have some type of idea of what you are making
4. →SON: I know what I'm making
5. DAD: what are you making
6. →SON: I told you a building

This sequence of turns at talk expresses the father's view that his son is producing something describable and objective. He thereby also implies that his son has a goal of accomplishing or creating something in his activity and that his son's actions are directed toward reaching that end (lines 1 and 3). The play session is now framed as a goal-oriented activity and the attendant decisions relating to practical and relational demands originate and flow from this opening sequence.

Goal Elaboration and Specificity

As the play session progresses, goals are re-defined and take on greater specificity; the goal of making a building is transformed and expanded. For example, in line 7 of Extract 2A we see that the goal is being re-defined with regard to the building's size. The father seeks greater specificity regarding the overall dimensions of the building:

Extract 2A

7. →DAD: ok let me see it let me see how you make the building are you going to make a tall building a wide building what
8. SON: like this big

Much later in lines 92 – 96 as show in Extract 2B we again see goal expansion and specificity as the father and son negotiate the height of Tallville. In lines 92 – 96 the father and son are offering their respective perspectives on how tall is tall enough to be considered Tallville:

Extract 2B

92. →DAD: could you really call it tallville
93. →SON: yeah
94. →DAD: I thought you wanted it up here
95. →SON: I said- I said this tall
96. →DAD: that's what I mean right (1.0) so we'll work on it some more

There is also greater elaboration in terms of the building's function. Of interest in Extract 2C, line 12, is the son, without prompting from his father decides he is going to make a work building. This youngster shows he understands buildings can be differentiated by function and purpose:

Extract 2C

12. →SON: I'm gonna make a work building
13. DAD: you're gonna make a work building

Once the function of the building has the father and son identify the building as something concrete and worthy of a name in lines 33 - 34 of Extract 2D:

Extract 2D

33. →DAD: now what are you going to name your building
34. →SON: uh Tallville

Planning and Procedural Logic, Resources, Features

Also embedded within practical demands are issues relating to procedural logic, what sorts of resources the dyad have available to them, how they will be used, and features that Tallville will include. In Extract 3, line 11, one observes the father's implicit instruction and guidance for developing a plan, namely identify an initial step and logic point of departure. In this case, the father offers architectural guidance:

Extract 3

11. →DAD: first let's get a base so it won't topple on us ok

Also of importance in realizing the goal of Tallville, is the use of available resources. As used here, available resources include physical objects available within the immediate environment to the father and son that could be used to reach their goal of making Tallville. For example, in line 46 of Extract 4A the son reaches behind him for a stool to sit on. At this juncture, Tallville is becoming taller so the boy uses the stool as a tool (available resource) to give himself some added height so that he can better negotiate adding blocks to Tallville:

Extract 4A

46. →SON: I can sit on this

47. DAD: can you ok now [you] be careful
48. SON: ((grunts))
[the son reaches for a small stool behind him to his right]

Available resources also include the building blocks the father and son are using to build Tallville. In lines 183 - 184 of Extract 4B the father identifies particular building blocks as resources for adding a sidewalk and bridge to the grounds of Tallville:

Extract 4B

183. →DAD: make sure you have enough for the sidewalk
184. →DAD: wait let's hold these these might be a bridge we can make a bridge

Another important element to Tallville is its design features, namely the colors that will comprise its exterior. In lines 54 – 57 the available colors are identified and the son makes his choice:

Extract 5A

54. →DAD: now which one you want tell me and I'll get it for you
55. SON: uh I'll pick
56. →DAD: red blue what green
57. →SON: green

Another design feature of Tallville is its boundaries, namely the physical features that demarcate and differentiate its grounds from its surroundings it is imagined to exist within. Boundaries are fist established by building a sidewalk around Tallville's perimeter. The sidewalk separates Tallville from all that is imagined to be outside its perimeter. in lines 130 – 131 of Extract 4B:

Extract 4B

130. →DAD: what is- now what's that gonna to be
131. →SON: this is going to be the sidewalk

There are also boundaries within Tallville. For example, in lines 156 – 157 of Extract 4C a bridge is introduced to Tallville. The bridge is another design feature and also connects one part of Tallville to another:

Extract 4C

156. DAD: wait let's hold these these might be a bridge we can make a bridge
157. SON: we're gonna make a bridge

The final feature of Tallville is its inhabitants. Once decisions regarding its size and function were worked out, the final feature is adding people. Of interest here is that it is the son who mentions adding people to Tallville. Tallville is slowly emerging as an imagined fantasy world:

Extract 4D

185. →SON: now we need- now we need some people
186. →DAD: ok we have to find the people now

Relational Demands of Making Tallville

The relational demands of the play activity are evinced through expressions that relate to issues of participation. For example, in lines 9 – 10 of Extract 5A we see the father invites his son to participate in making the building:

Extract 5A

9. →DAD: big and tall ok c'mon let's work on it
10. →SON: alright

In lines 24 – 25 of Extract 5B, we see the father invokes participatory roles, namely in the form of supervisor and worker, with regard to the building's construction:

Extract 5B

24. →DAD: here you got to help me now I can’t do it all I’m not a laborer
25. SON: I’ll help you

In Extract 5C, the participatory roles are still present, this time the father supervising Tallville’s construction and providing his son with blocks to build with:

Extract 5C

69. →DAD: ok here here’s some more how you gonna put them
(5.0)
70. →DAD: I’ll let you build it
[the father supplies his son with building blocks]

Also linked to relational demands of play are issues of collaboration and cooperation. In lines: 156 – 159 of Extract 6A we see a move toward collaboration and cooperation. Each has a role in making Tallville. The father and son are going to work together to build a bridge:

Extract 6A

156. →DAD: wait let’s hold these these might be a bridge we can make a bridge
157. →SON: we’re gonna make a bridge
158. →DAD: we’re gonna try think we can make a bridge
(3.0)
159. SON: yes

Lines 81 – 85 of Extract 6B show participation, collaboration, and cooperation. The father and son are each fulfilling a role and working together to realize the goal of Tallville. Of interest in Extract 6B is the extended silences, 12 seconds and 11 seconds.

There is not much talking in Extract 6B. Rather, the father and son have identified what they need to do and who will do it and each is playing his part:

Extract 6B

81. DAD: got to make it tall
(3.0)
82. DAD: ok
→(12.0)
83. →DAD: here's some more [father give son blocks]
(3.0)
84. DAD: gotta make 'em tall
→(11.0)
85. DAD: that's good

As the father and son work toward making Tallville, it is feasible to accept the notion that decision making has both practical and relational demands and these are inextricably connected. The practical demands of decision making focus on expressions that link to the pragmatic and tangible requirements subsumed in building something, namely Tallville. These expressions carry information content and facilitate the completion of the task from a practical standpoint. As seen above, these expressions link to pragmatic matters such as expressed goals and goal specificity, size, name, function, planning, use of available resources, design features, grounds, and inhabitants.

On the other hand, the relational demands of decisions are evinced through expressions that link to the relational element of pursuing an activity. Consideration of pronoun use is useful in informing an understanding of a particular social situation (Brown & Gilman, 1960; Mokros, Mullins, & Saracevic, 1995) and of a decision-making activity. For example, in lines 9-10 from Extract 5A above, the father uses the inclusive “let’s” after he accepts his son bid to make a building. The use of *us* asserts enmeshment or connectedness and co-participation. In Extract 5B, lines 24-25, the father imposes roles, namely those of a supervisor and a subordinate. Both the father and son participate, but the father makes it clear that there is a hierarchy within the participation. In another example from Extract 5C, lines 69-70, the father participates by handing blocks to his son but once again imposes roles on the dyad by “allowing” his son to build the building. This again suggests that there is a hierarchy within the participation and a power differential in their relationship: The father asserts his power by granting his son permission to work on the task while he looks on. He participates only through supplying his son with blocks, controlling which resources will be used.

Regarding collaboration and cooperation, the father again uses an inclusive pronoun “we” in the latter part of line 156 in Extract 6A to create the opportunity for him and son to work together on building a bridge, and his son accepts the challenge and the invitation. Cooperation is seen in Extract 6B, lines 81-85, where each is contributing to completing the task, the son by adding the blocks and the father by supplying the blocks.

These examples highlight the shift points or decision making points within the interaction. That is, these are the visible moments in the interaction where the father and son are shifting back and forth between making pragmatic decisions and relational decisions as they move toward their goal of making Tallville. As they make practical decisions about the task, they are also making decisions about each other and their relationship.

Non-Task Oriented Decisions: Relational Accomplishment During Play

Non-task oriented decision-making units were uni-dimensional and focused on acts that were not directly linked to carrying out the activity at hand. Examples of non-task oriented decisions include empathy/empathic displays, intimacy/sharing each other's inner world, creative play, and getting to know you talk. Creative play is a non-task unit because it does not directly link to the activity at hand. Instead, creative play is born from the activity at hand.

In the line 228 of Extract 7, the son imagines there is water on the grounds of Tallville:

Extract 7

228. →SON: they're look- they're looking in the water
229. DAD: ok what are they looking for
230. SON: they're looking for fish

Empathy and getting to know you talk is another example of a non-task unit. Empathy relates to taking the perspective of another person either on the levels of cognition or affect (Deutsch & Madle, 1975). Simply stated, you are putting yourself in another's shoes and looking at a situation from his/her perspective. In line 239 of Extract 8, the son is expressing interest in whether is father likes fish:

Extract 8

239. →SON: do you like fish
240. DAD: yeah it's pretty good do you like fish

Extract 9 is another example of an empathic display. In line 205 of this extract, the father recognizes his son would like Batman to be part of Tallville. He recognizes that including Batman is important to his son:

Extract 9

200. SON: how about batman can do it
201. DAD: no batman is not- he's not going to be in this
202. SON: why-
203. DAD: he's not going to be in this one this time
204. SON: why
205. →lDAD: because he really doesn't fit (3.0) but you want him to fit right
206. SON: but he can walk on the sidewalk
207. DAD: ok let me see him walk ((laugh)) on the sidewalk

Extract 95 is also a good example of how difficult it is to cleanly differentiate between task and non-task elements of play. On one hand, this could be understood as a practical decision about what to include in Tallville. On the other hand, this could be understood as a relational decision, a decision that indicates the father understands what would make his son happy or possibly as a decision that indicates the father understands his son's temperament and what could possibly derail what they have so far accomplished.

In sum, play as a decision making activity can be organized into task and non-task units. The task units are bi-dimensional, having both a practical and relational focus. Non-task units are uni-dimensional, focusing on expressions that are not directly linked to the activity at hand.

Finding 2 - Creating a Singular Space

When the play session begins, the father and son are arranged around a small square table. On the table is a green base for stacking the plastic, interlocking building blocks. The son is standing to this father's right, there is bucket of blocks on the floor between them, and there is a small stool out view behind the son. For more than 13 of the roughly 15 minutes of play the father and son remain in their original positions. The only ruptures to their arrangement occur when the son moves away from the table to retrieve the stool and when the son twice walks the perimeter of table while playing with an action figure. It should be noted that during two perimeter walks, the table, the activity, and his father are still the focus of the son.

The table, what is being built there, and the lateral space between the father and son, became the focal point of the activity through the father and son's spatial configuration. Each had immediate and equal access to what was on the table as well as to the bucket of building blocks on the floor. Throughout the activity, their bodies and heads created an interactional space where each had "direct, equal, and exclusive access" (Kendon, 1990, p. 209) and each maintained this common space by keeping their heads, torsos, and hips oriented to the interactional space.

Finding 3 – Coherence: Making Tallville, how about Batman, and do you like fish?

From the outset of the play session the father and son focused on a single activity, making a building, specifically making Tallville. Through making a series of pragmatic and relational decisions relating to making Tallville, the father and son's ill-defined problem evolved from a decision about what to do in a situation that asks them to play together for approximately 15 minutes to a decision about how they can get to know each other. Through imaginative play of what they have built, the father and son develop an awareness of the Other as a separate person and cultivate knowledge of each other and each other's inner world and glean an understanding of the Other.

The father's actions and seeming acquiescence to the plea to include Batman in Extract 9 reflects his understanding what could potentially trigger his son's happiness and what could potentially trigger an outburst. That is, the father is doing relational management by allowing Batman to enter Tallville's scene. The father compromises and acknowledges that including Batman would make his son happy even though it may be impractical to include Batman in Tallville's scene which has now taken on an imaginative and creative life of its own.

Extract 9

200 SON: how about batman can do it
201 DAD: no batman is not- he's not going to be in this
202 SON: why-
203 DAD: he's not going to be in this one this time
204 SON: why
205 →lDAD: because he really doesn't fit (3.0) but you want him to fit right
206 SON: but he can walk on the sidewalk
207 DAD: ok let me see him walk ((laugh)) on the sidewalk

In addition to using available tangible resources like the sidewalk or the bridge, the son imagines there is water on the grounds of Tallville and that some of the people of Tallville are looking in the water for fish (line 229). The son attributes purpose to their actions (line 233); they are looking for fish so they could eat it (235):

Extract 10

228. DAD: now what are they doing they're kind of
229. →SON: they're looking this is the water
230. DAD: oh ok that's the water and they're looking
231. SON: they're look- they're looking in the water
232. DAD: ok what are they looking for
233. →SON: they're looking for fish
234. DAD: oh ok
235. →SON: so they could eat it
236. DAD: oh
237. SON: so they could cook it and eat it
238. DAD: ok ok I see

Extract 10 reflects an empathic moment in line 235, when the son says, "so they can eat it." The son recognizes that like him, other people have needs, specifically the need to satisfy hunger. Additionally, the son attributes positive behavior to the people. They are not looking for fish in order to hurt them or senselessly kill them. The people are looking for fish to use as a resource to satisfy their hunger.

Empathic displays appear in Extract 11, first in line 239 when the son asks his dad if he likes fish and again in lines 240 and 242 when the dad asks his son if he likes fish and to disambiguate the term ‘heat’:

Extract 11

239. →SON: do you like fish
240. DAD: yeah it’s pretty good do you like fish
241. SON: if you cook it it’s hot to me
242. →DAD: is it I mean hot what with heat or it’s hot with spices
243. SON: it’s hot with heat
244. DAD: oh ok so when it cools off you really like it huh ok alright

When the son, in line 239 of Extract 11 asks his father if he likes fish he is demonstrating his ability to meaningfully recognize his father as separate from him. The son realizes that his father is a person who has his own likes and dislikes. The son is showing an interest in his father and is able to subordinate egocentrism. The father, in line 240 of Extract 11, reciprocates by asking his son if he likes fish and encourages his son’s pursuit of “getting to know you” and again in line 242 of Extract 11 when the father seeks clarification of his son’s use of “hot” in line 241 also in Extract 11.

These two sequences discussed above are significant accomplishments because they highlight the importance of communication in the developmental course of an individual’s life. These sequences provide insight into how relationships in the early stages of life are developed and how we begin to constitute our selves. Through the give and take of question and answer sequences we gain insight into an Other's inner world; we come to learn their likes and dislikes. Additionally, through question and answer sequences, we demonstrate our ability to meaningfully differentiate between ourselves and an Other.

The extracts discussed above provide evidence for our existence as being simultaneously psychological and social. Our existence is psychological in that presumably healthy functioning children and adults are able to demonstrate a meaningful awareness of Others as either like us or different from us (do you like fish?). Our existence is social in that presumably healthy functioning children and adults area able to collaborate, participate, and negotiate with others during everyday activities.

What began as a decision about how to spend approximately15 minutes playing together evolved into getting to know one another. The father and son decide to get to know each other by working on building Tallville and moving toward a greater state of intimacy and solidarity. The father and son expressions of empathy share insight into each other's private worlds of likes and dislikes. Visible in the question, Do you like fish? is the interconnectedness of the content and relational dimensions of decision making. Visible also is how we develop relationships at an early stage of life and begin to meaningfully differentiate between ourselves and Others in interaction.

Finding 4 - Mutuality

In reviewing each of the above results and looking at them collectively, it became apparent that throughout the course of the play session, the father and son were mutually engaged with the task and with each other. They were attendant to the practical demands of the activity and through extended periods of time, sustained a common focus, attention, engagement in and involvement with the task at hand, namely making Tallville, and each other. The overarching result of this study suggests the father and son were in a mutual state and that units of a mutual state could be recognized in interaction.

Collectively, the first 3 results of this research coalesce to produce interactional criteria for recognizing mutual or non-mutual states as interactional states during moments of engagement with a task or Other. Criteria for mutual states are evinced in talk, actions, and spatial configuration and orientation (Table 3.2).

Table 3.2

Interactional Criteria for Mutuality

Criteria	Requirements
Talk	1. Sequences of verbal actions treated as coherent and orderly by participants
Actions	1. Directed toward a common focus or task
Spatial Configuration/ Orientation	1. Orientation toward one another or a task in a localized space

Based on the first three findings of this study, as an Interactional State, mutuality has an Activity and a Focus. Activity is either play or not play and focus is either task or relational. Criteria for each are described in Table 3.3.

Table 3.3

Criteria for Activity and Focus Dimensions of a Mutual State

ACTIVITY	
Play	Not Play
1. Focus on pursuing what is commonly understood as a play activity; i.e., building something, playing with a puzzle, talk directly related to the play activity, playing catch and the like 2. Imaginative talk about and creative use of what the dyad built or created together	1. Focus is instrumental; focus on pursuing what could not be understood as a non-play activity; i.e., caregiving acts, talk not directly related to the activity at hand
FOCUS	
Task	Relational
1. Focus on talk concerning the practical aspects of the activity at hand; i.e., implementation, procedural logic, use of available resources	1. Talk that focuses on participatory roles; i.e., who will do what, collaborate or work independently 2. Focus on talk that reveals and shares each other's inner world 3. Getting to know you talk 4. Caregiving actions; i.e., tying a shoe, soothing behaviors, well-being checks, diaper changes, washroom breaks, and the like

Categories for Coding Mutuality in Father-Son Interaction

Once criteria were developed, the coding system yielded five categories:

(1) Play Task State (PT)

A state of father-son play interaction focused on the practical demands of the task at hand (e.g., creating a building out plastic interlocking blocks or putting together a puzzle).

(2) Play Relational State (PR)

A state of father-son play interaction focused on the relational demands of the task at hand (e.g., roles related to play activity, who will oversee building construction, and who will supervise its construction).

(3) Non Play Task State (T)

A state of father-son interaction whose focus is instrumental (e.g., dad asks child to tie shoes; kid asks when will mom be home).

(4) Non Play Relational (R)

A state of father-son interaction focusing on relational concerns (e.g., Father: do you need to go to the bathroom?; father helps child wipe his nose or adjust his socks and shoes).

(5) Non Mutual State (Ø)

A state where father and son are not interacting with each other (e.g., father answers and speaks on cell phone; son attends to noises from other room, looking in its direction).

Once this single father-son play session was coded, an Interaction Map was created (Figure 3.1). The Interaction Map in Figure 3.1 shows the map of the father-son interaction. That is, it shows the how this father and son exhibited mutuality throughout their play session. These Interaction States were then analyzed using Sequential Analysis.

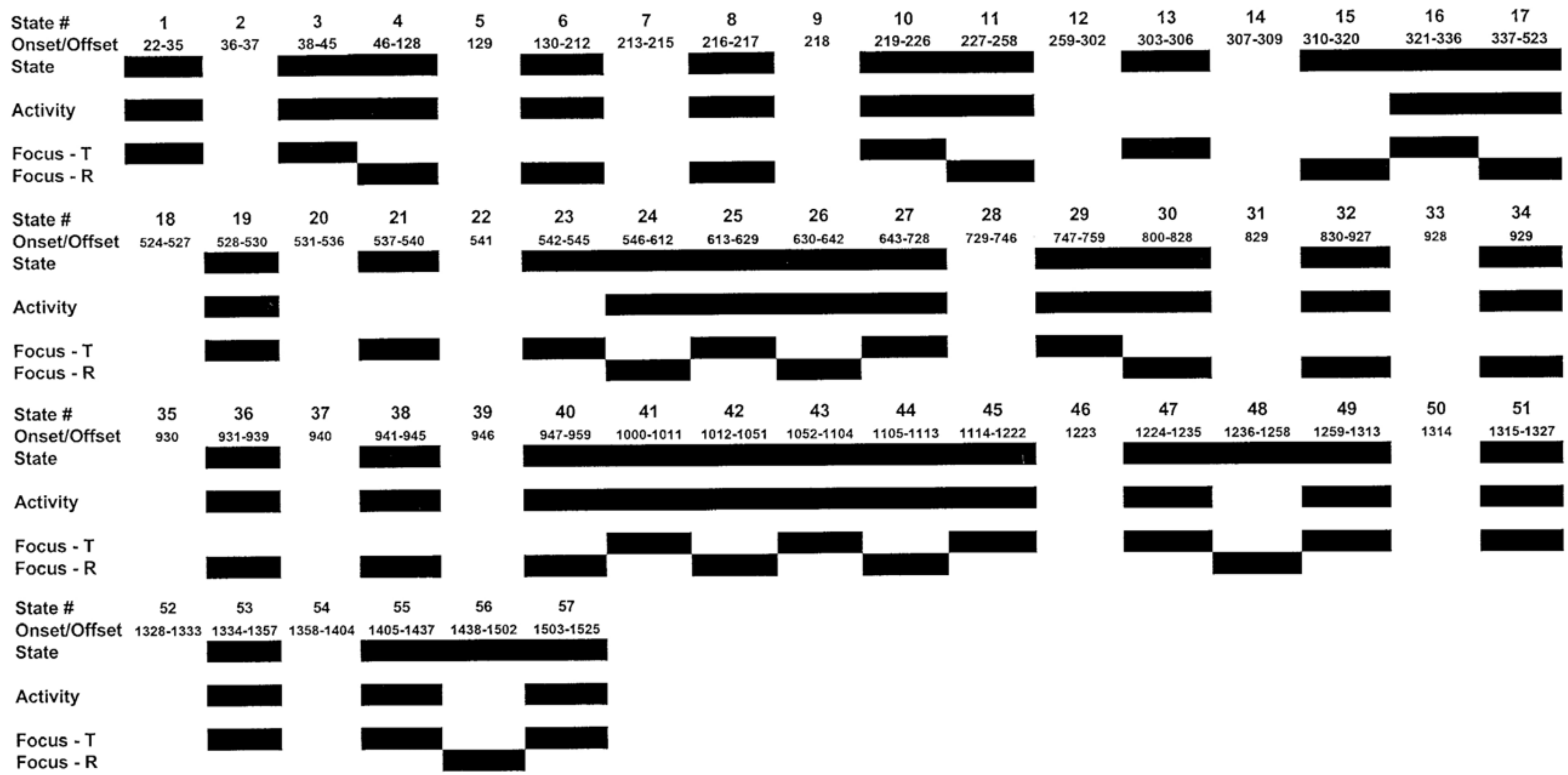


Figure 3.1. *A Map of a Single Father-Son Play Interaction from Study 1.*

Finding 5 - Sequential Patterns in Father-Son Play within a Single Dyad

This section discusses the sequential patterning of a single father-son dyad during approximately 15 minutes of self-determined play. It does so by examining sequences of Interaction States. These States were derived by applying the coding system for mutuality to the father-son dyad investigated in this study.

Table 3.4 is a transition matrix that displays the total number of Interaction State sequences that occur during approximately 15 minutes of self-determined father-son play. All states assume a mutual state, except for 'Ø', which is the designation for a Non-Mutual State.

Table 3.4

Transition Matrix of State Sequences During Father-Son Play

		Follows					
		PT	PR	T	R	Ø	Total
Precedes	PT		7	0	2	7	16
	PR	5		0	0	10	15
	T	0	1		0	2	3
	R	0	1	0		2	3
	Ø	8	7	3	1		19
Total		13	16	3	3	21	56

Interaction sequences involve a shift from one Interaction State to another. There were 56 sequences during approximately 15 minutes of father-son play. Rows indicate the preceder states, and the columns indicate the follower states. The first row shows total number of preceders for PT with PT followed by PR and Ø seven times with no sequences of PT and T. Overall, PT was a preceder 16 times. The empty cells represent structural zeros. That is, an Interaction State can never precede or follow itself because each state is mutually exclusive and exhaustive. The transitional matrix in Table 1 can be productively mined to identify sequential patterns and map the play interaction's structure. Figures 3.2 – 3.8 present sequential diagrams and adapted from Cockett (2000).

The diagrams are organized so that the state of interest is placed in the center. The column immediately to the left is the interaction state that the state of interest preceded. Immediately to the right is the interaction state that the state of interest immediately followed. The arrows point toward or away from the state of interest to indicate which state precedes it and which state follows it. If an arrowhead points away from the state of interest, this indicates the state of interest preceded the state it points toward. If the arrowhead points toward the state of interest, this indicates that the state of interest followed the state pointing toward it. The numbers in parenthesis indicate the number of times a state was a preceder or a follower. In the far left- and right-hand columns are those states that were neither preceded nor followed.

In Figure 3.2, PT is the state of interest. Looking at the diagram, one observes that PT preceded a PR state and a Ø state seven times and an R state twice. As a follower a PT state followed a PR state five times, but it followed a Ø state eight times. These numbers reflect a relationship among PT, PR, and Ø interaction state.

Does not Precede	Preceder State	Interaction State	Follower State	Does not Follow
	PR (5)		PR (7)	
T		PT		T
R			R (2)	
	0 (8)		Ø (7)	

Figure 3.2. Diagram of Sequential Patterns in Father-Son Play with Play Task as the Interaction State of Interest.

PR was the next state of interest. Looking at the diagram in Figure 3.3, one immediately notices that PR followed more interaction states than PT in Figure 4 above but preceded fewer. In fact, a PR state followed every state at least once during father-son play. PR preceded and followed a PT state at five times and a Ø state 10 tens times. Once again, these numbers reflect a relationship among PT, PR, and Ø interaction states.

Does not Precede	Preceder State	Interaction State	Follower State	Does not Follow
	PT (7)		PT (5)	
	T (1)	PR		
	R (1)			
	Ø (7)		Ø (10)	

Figure 3.3. Diagram of Sequential Patterns in Father-Son Play with Play Relational as the Interaction State of Interest.

The third state of interest was T. Looking at the diagram in Figure 3.4, one immediately observes that T states did not widely populate this father-son's play session. The transitional matrix (Table 3.4) above shows that only three T states were recorded during the entire play session. As a preceder, a T state preceded a PR state once and a Ø state twice. As a follower state, T followed a Ø state three times. One interesting finding is that PT and T are not sequentially related (Figure 3.2 and Figure 3.4).

Does not Precede	Preceder State	Interaction State	Follower State	Does not Follow
PT				PT
PR			PR (1)	
		T		
R				R
	Ø (3)		Ø (2)	

Figure 3.4. Diagram of Sequential Patterns in Father-Son Play with Task as the Interaction State of Interest.

The next state of interest is R. Like T, R occurred only a three times (Table 3.4) during this father-son's play session. Figure 3.5 below shows that R preceded a PR state once and a Ø state twice. As a follower, R followed PT twice and Ø once.

Does not Precede	Preceder State	Interaction State	Follower State	Does not Follow
	PT (2)			PT
PR			PR (1)	
T		R		T
	Ø (1)		Ø (2)	

Figure 3.5. Diagram of Sequential Patterns in Father-Son Play with Relational as the Interaction State of Interest.

Ø is the final state of interest. Figure 3.6 below shows that Ø is sequentially linked to every Interaction State as either a preceder or a follower. Only PR as a follower state is comparable (Figure 3.3). As a preceder, a Ø state comes immediately prior to eight PT states and seven PR states. However, a Ø state most often occurs after a PR state, with 10 sequences.

Does not Precede	Preceder State	Interaction State	Follower State	Does not Follow
	PT (7)		PT (8)	
	PR (10)		PR (7)	
	T (2)	Ø	T (3)	
	R (2)		R (1)	

Figure 3.6. Diagram of Sequential Patterns in Father-Son Play with Ø as the Interaction State of Interest.

The sequential analysis shows that the states most frequently transitioned into and out of are Ø, PT, and PR. This suggests that T and R States, Not Play States, did not occur as often. Table 3.4 shows that Not Play States, T and R respectively, only occurred six times during this interaction.

Figures 3.7 and 3.8 display the sequential relationship among Ø, PT, and PR without T and R States. Figure 3.7 shows that Ø preceded a PT state eight times and a PR state seven times. PR preceded at PT state five times. That is, Non-Mutual States were predominantly preceded by PR States and predominantly followed by PT States.

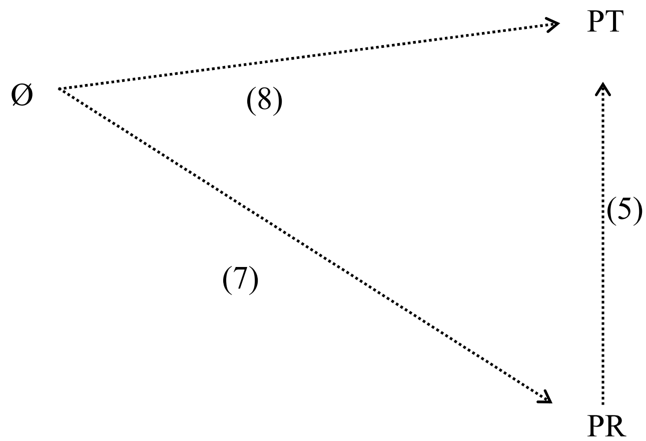


Figure 3.7. The sequential relationship among Ø and PT interaction states and Ø with Ø as the preceder state.

Figure 3.8 shows Ø and PR as follower states. Ø follows a PT state seven times and a PR state 10 times. PR follows a PT state seven times. This diagram shows that this dyad was more likely to transition through PT, PR, and Ø, suggesting that most of their time was spent in Play, and that they were balancing their time on the task and relational demands of play throughout their play session.

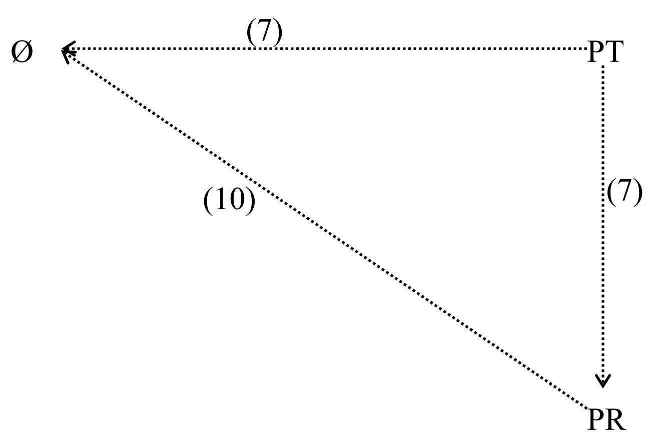


Figure 3.8. The sequential relationship between Ø and PT interaction states and Ø with Ø as the follower state.

Summary of Findings for Study 1

Study 1 produced five noteworthy results: 1) the father and son shuttle back and forth between the practical and relational demands of play, attending to the task and each other, 2) the father and son created and used a singular space, and for the majority of the play session (<14 minutes) maintain their original positions with only minor variations; 3) the father and son maintained a singular, coherent, focused activity for the entirety of their play session resulting in the youngster's empathic display and his meaningful distinction between self and Other within interaction, 4) the development of a state-based coding scheme for identifying interactional criteria for mutuality within intimate relationships, and 5) the sequential patterning of mutuality within a single father-son dyad and the dominant states, namely PT, PR, and Ø. The first three of these findings lead to the fourth, namely a conceptual framework and coding scheme for mutuality. The state-based coding scheme for mutuality has three levels, namely State, Activity, and Focus.

The initial ill-defined problem of how to spend time together playing for approximately 15 minutes evolved into a well-defined problem, namely making Tallville. Making Tallville required the father and son to make multiple practical and relational decisions to achieve their goal, to create and share a common interaction space, to maintain a singular, coherent focus. Through their attendance to and focus on the task of making Tallville and their attendance and focus on each other, this research provides empirical evidence for criteria for coding units of decision making between intimates and for coding units of interaction as mutual or non-mutual within moments of engagement.

What began as a study of decision-making between intimates evolved into an inquiry into mutuality within father-son play.

CHAPTER FOUR

Study 2: Mutuality in Father-Son Interaction Within and Across Dyads at Two Points in Time

Study 2 examines similarities and differences in the extent and quality of mutuality within and across dyads at two points in time. Study 2 focuses on questions relating to overall amount of Mutuality across and within dyads; overall Mutual States, defined by Activity (play/not play) and Focus (task/relational). The term Interaction States is used to refer a Mutual State defined by Activity and Focus. This dissertation is concerned with mutuality and therefore only analyzes Mutual States. When the term Interaction State is used, mutuality is being discussed in terms of Activity and Focus.

Mutuality is conceptualized as an interactional state distinct from non-interactive co-presence. Through applying the coding system for mutuality developed in Study 1, this research identifies four Interaction States defined by Activity (play/not play) and Focus (task/relational) and Non-Mutual States. Non-Mutual States were not further elaborated by Activity and Focus. The 5 Interaction States are: 1) play task, 2) play relational, 3) non play task, 4) non play relational, and 5) non mutual. Brief descriptions of each follow.

(1) Play Task (PT). A state of father-son play interaction focused on the practical demands of the task at hand (e.g., creating a building out plastic interlocking blocks or putting together a puzzle).

(2) Play Relational (PR). A state of father-son play interaction focused on the relational demands of the task at hand (e.g., roles related to play activity, who will oversee building construction, and who will supervise its construction).

(3) Non Play Task (T). A state of father-son interaction whose focus is instrumental (e.g., dad asks child to tie shoes; kid asks when will mom be home).

(4) Non Play Relational (R). A state of father-son interaction focusing on relational concerns (e.g., Father: do you need to go to the bathroom?; father helps child wipe his nose or adjust his socks and shoes).

(5) Non Mutual State (Ø). A state where father and son are not interacting with each other (e.g., father answers and speaks on cell phone; son attends to noises from other room, looking in its direction).

GENERATING AND COMPUTING INTERACTION STTE DATA

Frequency counts for Interaction States were tallied for each dyad at two points in time. Analyses involved deriving proportions and computing odds and odds ratios of a dyad being coded in a particular state. As discussed in Chapter 2, odds are the likelihood of *X* occurring in relation to X not occurring and odds ratios are the likelihood of *X* occurring conditioned on the occurrence of *X* occurring. This section begins with a discussion of the overall time spent in Mutual and Non-Mutual states followed by consideration of the proportion of Interaction States by dyad and then moves finally to a discussion of odds and odds ratios of interaction states by dyads. To conclude, summary statements regarding these data will be presented.

This study examines with the differences in the extent and quality of mutuality within and across dyads. It addresses the following research questions:

RQ 1: Do dyads significantly differ in the overall Mutuality? States? Activity? Focus?

RQ 2: Does the quality of mutuality vary between Dyads? Time independent of dyads, and Within dyads by time?

MUTUALITY, INTERACTION STATES, ACTIVITY, AND FOCUS OF FOUR DYADS

This section considers the overall amount of time each dyad spent in a Mutual State, the overall frequency and proportion of Mutual States, the frequency and proportion of Interaction States (Mutual States defined by Activity and Focus), the Activity of each state irrespective of Focus, and the Focus of each state irrespective of Activity. Amount of time spent in mutuality is considered first.

Mutuality/Non Mutuality across Four Dyads at Two Points in Time

The first question this study considers is the overall amount of mutuality for four dyads (D1 – D4) at T1 and T2. Table 4.1 reports the amount of time spent in Mutual and Non-Mutual states by dyad.

Table 4.1

Proportion of Time Spent in Mutual/Non Mutual States

	TIME 1		TIME 2	
	M	∅	M	∅
Dyad 1	.90	.10	.96	.04
Dyad 2	.94	.06	.93	.07
Dyad 3	.94	.06	.91	.09
Dyad 4	.76	.24	.79	.21

Overall, these data show that all dyads exhibit more mutuality than non mutuality. As shown, D1 – D3 were comparable in the proportion of time spent in mutual and non-mutual states at T1 and T2. D4 had the smallest proportion of time in a Mutual State and the largest proportion of time in a Non-Mutual state at T1 and T2. Of the four dyads, D4 stands out with respect to comparatively how less time they spend engaged in mutuality over time. D1 shows a slight increase in proportion of time in a Mutual State at T2, but overall dyads are consistent over time. Mutual States are considered next.

Frequency and Proportion of Mutual States

This section considers the frequency and proportion of Mutual States for four dyads at two points in time. Table 4.2 reports the frequency and proportion of Mutual States collapsing across Dyad. Time 1 is considered first.

Table 4.2

Frequency and Proportion of Mutual States by Dyad

	TIME 1	TIME 2
	Mutual States	Mutual States
Dyad 1	42 .19	47 .24
Dyad 2	33 .15	25 .13
Dyad 3	59 .27	42 .22
Dyad 4	82 .38	78 .41
Total	216	192

Time 1

As shown, there are 216 Mutual Sates at T1. At T1 Mutual States by dyad range from 33 – 82 (M = 54). The proportion of Mutual States range from a high of .38 to a low of .15 at T1. Two dyads, namely D1 and D2 fall below the mean while D3 and D4 are above the mean. D2 and D4 show the fewest and most Mutual States respectively and show the smallest and largest proportion of Mutual States across dyads at T1. This indicates that at T1, D2 transitions between states least often across dyads, and D4 transitions between Mutual States most often across dyads.

Time 2

At T2 there are 192 Mutual States across dyads, showing a decrease from T1. The decrease in Mutual States at T2 suggests dyads, on average, allocate more time within Mutual States and subsequently transition less often between Mutual States at T2.

At T2 the Mutual States by dyad range from 25 – 78 (M = 48). Three dyads, namely D1 – D3 fall below the mean while only D4 is above the mean. The proportion of

Mutual States range from a high of .41 to a low of .13 at T2. D2 and D4 repeat their T1 pattern, namely showing the fewest and most Mutual States respectively and showing the smallest and largest proportion of Mutual States across dyads at T2. This also repeats D2's and D4's pattern of transitioning between Mutual States at T1. That is to say, at T2, D2 and D4 transition between Mutual States the least and most often across dyads. Across dyads, D3 has the widest range of Mutual States over time, though the range is not too expanded.

Statistical Test of Equiprobabilty of Interaction State by Time and by Dyad

A loglinear test of equiprobability of Mutual State by Time, independent of Dyad, was not significant [*Likelihood ratio chi-square* (L^2) = 4.36, df = 4, p = .359]. This indicates that the observed frequencies of Mutual States at T1 and T2 do not differ statistically from expected frequencies at T1 and T2 when those expected frequencies are modeled under the assumption of equivalent frequencies at T1 and T2. In contrast, a loglinear test of equiprobability of Mutual State by Dyad, independent of Time, was significant [L^2 = 55.27, df = 6, p = .000]. This indicates that the observed frequencies of Mutual State across Dyads (D1-D4) differ statistically from expected frequencies when expected frequencies are modeled under the assumption of equivalent frequencies across all four dyads.

Activity across Four Dyads

This section considers the frequency and proportion of Activity irrespective of Focus. Activity is defined as play or not play. Table 4.3 reports frequency and proportions of Activity for four dyads (D1 – D4). Time 1 is considered first.

Table 4.3

Frequency and Proportion of Activity by Dyad

	TIME 1 Activity			TIME 2 Activity		
	Play	Not Play	Total	Play	Not Play	Total
Dyad 1	37 .88	5 .12	42	42 .89	5 .11	47
Dyad 2	28 .85	5 .15	33	20 .80	5 .20	25
Dyad 3	51 .86	8 .14	59	41 .98	1 .02	42
Dyad 4	72 .88	10 .12	82	78 1.0	0 --	78
Total	188 .87	28 .13	216	181 .94	11 .06	192

Time 1

There are 216 instances of an Activity State at T1 with 188 (87%) of these States of Play. The frequency of Play range from 28 – 72 (M = 47) and range in proportion from 0.85 - 0.88 across dyads. Although there is great variation in the frequency of Play across dyads, there is very little variation across dyads in the proportion of Play to Non-Play activity states.

Time 2

At T2 there are 192 instances of an Activity State with 181 (94%) of these States of Play. The frequency of Play states range from 20 – 78 (M = 45.25) and range in proportion from 0.80 to 1.00 of all Activity States. Compared with T1, the overall proportion of Play states are higher than Non-Play states, with only one dyad, D2, showing a lower proportion of Play at T2 than T1. D1 and D2 show the least change in proportion of Play states between T1 and T2, while D3 and D4 show the greatest with only one instance of Non-Play noted between them at T2.

Statistical Test of the Observed Frequency of Activity by Time and Dyad

A loglinear test of independence of Activity (Play/Not-Play) by Time, controlling for Dyad, was not significant [$L^2 = 5.88$, $df = 3$, $p = .117$]. Thus, the observed frequencies of activity states across dyads by Time do not differ from the expected distribution of activity states generated under the assumption that the association between Time by Activity is equivalent to zero. In contrast, a test of independence for Activity by Dyad, controlling for Time, was significant [$L^2 = 24.57$, $df = 7$, $p = .001$]. Thus, the significant variation unaccounted for in test of the observed and expected frequencies is attributable to significant association between Activity abyDyad, since the independence model tests the assumption of no interaction effect (i.e., Activity x Dyad = 0.00) . Worth noting in the interpretation of this finding is the marked imbalance between Play and Non-Play activity states. The imbalance itself is of greater importance than the effect noted.

Focus across Four Dyads

This section considers the frequency and proportion of Focus, defined as task or relational. Table 4.4 reports the frequency and proportion for states of Focus by Time and Dyad (D1 – D4). Time 1 is considered first.

Table 4.4

Frequency and Proportion of Focus by Dyad

	TIME 1 Focus			TIME 2 Focus		
	Task	Relational	Total	Task	Relational	Total
Dyad 1	21 .5	21 .5	42	22 .47	25 .53	47
Dyad 2	14 .42	19 .58	33	20 .80	5 .20	25
Dyad 3	32 .54	27 .46	59	26 .62	16 .38	42
Dyad 4	47 .57	35 .43	82	54 .69	24 .31	78
Total	114 .53	102 .47	216	122 .64	70 .36	192

Time 1

Task Focus accounts for 114 (53%) of the 216 instances of Focus at T1. The range in frequency is 14 - 47 for Task states and 19 - 35 for Relational states, with the proportion of Task states ranging from 0.42 to 0.57 across dyads. D2 is the only dyad with a greater proportion of Relational than Task states.

Time 2

Task accounts for 122 (64%) of 192 Focus states at T2. Thus, the proportion of Task in comparison to Relational Focus states shows a notable increase in comparison to T1. The frequency of Task states range from 20 – 54 and range in proportion from 0.47-0.80. Thus, not only is the overall proportion of Task states higher than at T1, the range of proportions also shows much greater variability between dyads. (0.47-0.80 at T2 vs. 0.42-0.57 at T1)

For individual dyads only, only D1 shows a decrease, and then only slight, in the proportion of Task focus.. D2 shows the most dramatic increase in Task state and complementarily the most dramatic decrease in relational focus at T2 in comparison to T1. Thus, D2 thereby also shows the greatest within dyad deviation in Task and Relational state proportions at T1 and T2.

Statistical Test of the Observed Frequency of Focus by Time and Dyad

A loglinear test of independence of Focus (Task/Relational) by Time (independent of Dyad) was not significant [$L^2 = 5.14$, $df = 3$, $p = .162$]. Thus, the observed frequencies of focus states across dyads by Time do not differ from the expected distribution of focus states generated under the assumption that the association between Focus by Time is equivalent to zero. In contrast, a test of independence for Focus by Dyad (independent of Time) was significant [$L^2 = 16.94$, $df = 7$, $p = .018$]. The significant variation unaccounted for by the model of independence is attributable to significant Focus and Dyad interaction.

Summary of Findings

The data show dyad differences in the ways in which fathers and sons spend time together during the eight videotaped sessions analyzed. At a most general level, the dyads differed significantly in the overall amount of recorded session time spent in Mutuality. Although time spent in Mutuality was comparable at T1 and T2 within each dyad, Mutuality differed across dyads. The Dyad difference in Mutuality is attributable to the distinction of D4 from the others, with differences in Mutuality between D1-D3 negligible.

The observable features of difference for Mutual State, Activity, and Focus were first examined in terms of frequencies, proportions and ratios, and thereafter tested through loglinear models. The models tested showed the following results. The observed frequencies of interaction states revealed significant main effects of Dyad and Time when each of these factors was tested against the assumption of equiprobability. A significant association of Dyad by both Activity and Focus was also identified through testing the assumption of no association between Dyad and these two qualitative dimensions of Interaction State coded in this research.

In sum, Study 2 shows that there are dyad differences and within dyad changes with respect to Play. Time is important in relation to individual dyads, especially in terms of Focus because Not Play states are rare overall.

QUALITY OF MUTUALITY ACROSS AND WITHIN DYADS

The second question Study 2 considers is the quality of mutuality over time within and across Dyad, specifically whether Mutuality varies by Time (independent of Dyad), by Dyad (independent of Time), and by Dyad controlling for Time.

Interaction States across Four Dyads at Two Points in Time

Table 4.5 reports the frequencies and proportions of Interaction States. That is, Table 4.5 reports Activity and Focus by four dyads (D1- D4) at two points in time. Time 1 will be considered first.

Time 1

The frequency of PT states by dyad range from 12 – 43 (M = 25.75). The frequency of PR states by dyad range from 16 – 29 (M = 21.25). The frequency of T states by dyad range from 2 – 4 (M = 2.75). The frequency of R states by dyad range from 3 – 6 (M = 4.25). D3 and D4 were above the mean across all states while D1 and D2 were below.

The proportion of PT states by dyad at T1 ranged from .36 - .52. The proportion of PR states by dyad at T1 ranged from .35 - .48. The proportion of T states by dyad at T1 ranged from .05 - .06. The proportion of R states by dyad at T1 ranged from .07 - .09 (Table 4.5).

Time 2

The frequency of PT states by dyad range from 19 - 54 (M = 30.25). The frequency of PR states by dyad range from 1 - 24 (M = 15). Dyads D2 and D4 were above the mean in PT states while D1 and D3 were at or above the mean in PR states. T and R states were overall infrequent at T2, with no occurrences of T noted for three dyads, and only one instance of T for the fourth (D2). Instances of R were far more frequent than T (10 vs. 1 all at T2) but rare in relation to all states, accounting for only 5% of all states at T2. No instances of either T or R states were observed for one dyad (D4) and only one instance of either T or R states was observed for a second dyad (D3).

The proportion of PT states by dyad at T2 range from .47 - .69. The proportion of PR states by dyad at T2 range from .04 - .43. The proportion of T states by dyad at T2 range from .0 - .04. The proportion of R states by dyad at T2 range from .0 - .16.

When compared to T1, the T2 proportion PT states increases while the proportion of time in a PR state decreases, an indication , that within Play, more Focus on Task demands than Relational demands. The proportion Non-Play states decrease dramatically at T2 when contrasted with T1, with the decrease in T most dramatic.

Table 4.5

Frequency and Proportion of Interaction States across Dyads

TIME 1

	Interaction States				
	PT	PR	T	R	Total
Dyad 1	19	18	2	3	42
	.45	.43	.05	.07	.19
Dyad 2	12	16	2	3	33
	.36	.48	.06	.09	.15
Dyad 3	29	22	3	5	59
	.49	.37	.05	.08	.27
Dyad 4	43	29	4	6	82
	.52	.35	.05	.07	.38
Total	103	85	11	17	216
	.48	.39	.05	.08	

TIME 2

	Interaction States				
	PT	PR	T	R	Total
Dyad 1	22	20	0	5	47
	.47	.43	0	.11	.24
Dyad 2	19	1	1	4	25
	.76	.04		.16	.13
Dyad 3	26	15	0	1	42
	.62	.36	0	.02	.22
Dyad 4	54	24	0	0	78
	.69	.31	0	0	.41
Total	121	60	1	10	192
	.63	.31	.005	.05	

Rank Order of Dyads by Proportion

The high-low rank order of the dyads by frequency of Interaction States at T1 and T2 is presented in Table 4.6. Time 1 is considered first.

Time 1

At time T1 as shown in the top half of Table 4.6, the variability in T and R states is minimal, with three dyads having equal proportions of T states and two equal proportion of R states. D2 has the highest proportion of both T and R states.

D4 has the highest proportion of PT states and the lowest proportion of PR states, while D2 has the lowest proportion of PT states and the highest proportion of PR states. D1 and D3 show the least difference in proportions of PT and PR states.

Time 2

At T2 as shown in the lower half of Table 4.6, D2 is the highest ranked dyad for both T and R states, and the only dyad with instances of both states. The table also shows D2 with the highest proportion of PT states and the lowest proportion of PR states at T2. D1 shows the highest proportion of PR states and the lowest proportion of PT states at T2.

Table 4.6

Rank Order of Dyads by Proportion of Interaction States

TIME 1			
Interaction States			
PT	PR	T	R
D4: .52	D2: .48	D2: .06	D2: .09
D3: .49	D1: .43	D1: .05	D3: .08
D1: .45	D3: .37	D3: .05	D1: .07
D2: .36	D4: .35	D4: .05	D4: .07
TIME 2			
Interaction States			
PT	PR	T	R
D2: .76	D1: .43	D2: .04	D2: .16
D4: .69	D3: .36	D1: .00	D1: .11
D3: .62	D4: .31	D2: .00	D3: .02
D1: .47	D2: .04	D3: .00	D4: .00

Interaction States by Time within and across Dyads

Table 4.7 shows the proportion of Interaction States within four dyads at T1 and T2. For D1, the proportion of PT states shows a slight increase at T2 while the proportion of PR states is equal at T1 and T2. For D2, the proportion of PT state doubles from T1 to T2 while the proportion of PR states decreases 19-fold over time.

Proportions of T states from T1 to T2 showed slight variation across dyads while the proportion of R states varied considerably within dyads over time. Only D4 showed no proportion of time in an R state at T2.

Table 4.7

Within Dyad Comparison of Proportion of Interaction States Over Time

	Interaction States							
	PT		PR		T		R	
	T1	T2	T1	T2	T1	T2	T1	T2
Dyad 1	.45	.47	.43	.43	.05	.00	.07	.11
Dyad 2	.36	.76	.48	.04	.06	.04	.09	.16
Dyad 3	.49	.62	.37	.36	.05	.00	.08	.02
Dyad 4	.52	.69	.35	.31	.05	.00	.07	.00

Odds of Interaction States Within and Across Dyads

Table 4.8 reports the odds of interaction states for four dyads (D1 – D4) at T1 and T2. Time 1 will be discussed first followed by a discussion of Time 2.

Time 1

The odds of a PT state by dyad at T1 range from .57 – 1.10. The odds of a PR state by dyad at T1 range from .55 - .94. The odds of a T state by dyad at T1 range from .05 - .06. The odds of an R state by dyad at T1 range from .08 - .10.

Time 2

The odds of a PT state by dyad at T2 range from .88 – 3.12. The odds of a PR state by dyad at T2 range from .04 - .74. The odds of a T state by dyad at T2 range from 0 - .04. The odds of an R state by dyad at T1 range from 0 - .19.

Table 4.8

Odds of Interaction States Across Dyads

TIME 1				
	Interaction States			
	PT	PR	T	R
Dyad 1	.83	.75	.05	.08
Dyad 2	.57	.94	.06	.10
Dyad 3	.97	.59	.05	.09
Dyad 4	1.10	.55	.05	.08
TIME 2				
	Interaction States			
	PT	PR	T	R
Dyad 1	.88	.74	0	.12
Dyad 2	3.12	.04	.04	.19
Dyad 3	1.63	.56	0	.02
Dyad 4	2.25	.44	0	0

Rank Order of Dyads by Odds of Interaction States

The high-low rank order of the dyads by odds of interaction states at T1 and T2 is presented in Table 4.9.

Table 4.9

Rank Order of Dyads by Frequency Interaction States

TIME 1			
Interaction States			
PT	PR	T	R
D4: 1.10	D2: .94	D1: .06	D2: .10
D3: .97	D1: .75	D2: .05	D3: .09
D1: .83	D3: .59	D3: .05	D1: .08
D2: .57	D4: .55	D4: .05	D4: .08

TIME 2			
Interaction States			
PT	PR	T	R
D2: 3.12	D1: .74	D2: .04	D2: .19
D4: 2.25	D3: .56	D1: 0	D1: .12
D3: 1.63	D4: .44	D3: 0	D3: .02
D1: .88	D2: .04	D4: 0	D4: 0

Time 1

As shown, D4 had the highest odds of exhibiting a PT state at T1 and the lowest odds of exhibiting a PR state at T1. D2 has higher odds of exhibiting a PR state than a PT state at T1 and is the only dyad whose odds of PR state are higher than in a PT state. All other dyads have higher odds of exhibiting a PT state at T1.

Time 2

At T2, Dyad 1 shows that over time the odds of exhibiting a PT or a PR state change very little. In fact, at T2, the odds of D1 exhibiting a PR state are practically equal.

At T2, all dyads show lower odds of exhibiting a PR state and higher odds of experiencing a PT state. D2 – D4 show the greatest increase in odds of exhibiting a PT state at T2.

Odds Ratios for Interaction States by Dyad

Table 4.10 presents the odds ratio for Interaction States. As discussed in Chapter 2, the odds ratio is a way of comparing how the probability of a dyad exhibiting a particular interaction state changes through time. The odds ratio was calculated by dividing T2 by T1.

Table 4.10

Odds Ratio for Interaction States by Dyads

	Interaction State			
	PT (T2/T1)	PR (T2/T1)	T (T2/T1)	R (T2/T1)
Dyad 1	1.06	.99	--	1.5
Dyad 2	5.5	.04	.67	1.9
Dyad 3	1.68	.95	--	.22
Dyad 4	2.0	.8	--	--

Summary of Odds Data

As discussed above, the odds of a PT state for D2 – D4 increase over time while the odds for a PR state decrease over time. The most drastic decrease in odds of a PR state are shown by D2, where the odds of a PR state are practically nil. The data show that over time, D1 is just as likely to exhibit a PT or PR state. For D1 at T2, a PT state has slightly higher odds of a PR state, but the odds of both being exhibited are comparable. This suggests consistency within this dyad over time.

Over time, D2 showed the greatest variability with respect to experiencing a PT and a PR state. For D2 at T2, the odds of experiencing a PT state increased the most while the odds of experiencing a PR state decreased the most. This suggests lopsided play sessions across time, where PR states had very little presences at T2.

D3 and D4 had increased odds of experiencing a PT state, but also showed fairly high odds of experiencing a PR state as well. Looking at non-play states, only D1 and D2 showed significant increase in experiencing a non-play state over time.

Summary - Quality of Mutuality Across and Within Dyads

The purpose of this section was to examine the amount and quality of mutuality across four dyads at two points in time using the coding system for mutuality developed in Study 1. Four Mutual States were identified by their Activity, namely play or not play and by their Focus, namely task or relational.

Across dyads, Play States, independent of Focus, accounted for the highest proportions of Mutual States. Over time PT states increase while PR states decrease indicating that over time more attention is allocated to the practical demands of play than the relational demands of play. Overall, Non-Play States decrease over time, indicating that across dyads more attention is allocated to the activity play rather than non-play.

Over time, there was an increase in the proportion of PT states within and across all dyads, though D2 was distinct, doubling its proportion of PT states over time. D2 was also distinct with respect to PR states, showing a considerable decrease, 19-fold, in PR states over time.

D1 showed the most consistency across time exhibiting the most balance interaction over time and across dyads. Interaction state data suggest a balanced interaction with respect to how D1 allocated their time on the practical and the relational demands of play.

D2 showed the greatest inconsistency in how they allocated their time within PT and PR states over time. At T1, D2 showed a strong preference for PR sates, while at T2 the proportion of PR states decreased significantly. At T2, Dyad 2 had the smallest proportion of PR states across all dyads. This suggests that at T2, Dyad 2 allocated very little time to the relational demands of play at T2, favoring PT states. The proportion of T states at T1 and T2 were comparable unlike all other dyads. The proportion of R states is greater than all other dyads at T1 and T2. This suggests at T2 this dyad spent more time away from play than other dyads.

D3 and D4 showed variation in proportion of time spent in a PT state across time, though not as much as D2. D4 had the highest proportion of time spent in a PT state at T1 while D3 was ranked second. This suggests these dyads showed a strong preference for mutuality during a PT state. While D2 had the highest proportion of PT states at T2, D3 and D4 each showed high a proportion of time in a PT again suggesting a preference for mutuality in a PT state as well as much of their time being devoted to the practical demands of play rather than the relational demands.

In sum, D2 – D4 each varied in the quality of mutuality over time. For D2, PR at T1, was the highest across all dyads though not extreme while at T2 they barely exhibited mutuality in a PR state. The inverse can be said of D3 and D4. That is, each of these dyads showed a strong preference for experiencing mutuality in a PT state at T1 and T2 and though these dyads exhibit mutuality in a PR state, it was proportionally less than the mutuality exhibited in a PT state. In fact, at T2 the proportion of mutuality exhibited in a PR state was approximately half that of the proportion of mutuality exhibited in a PT state at T2. Only one dyad, D1, showed any consistency and balance in how they exhibited mutuality across time. The data show that D1 was the most stable and behaviorally the most consistent dyad in this study.

As shown, D1's odds of experiencing a PT or PR state over time are equal. This means that the odds of experiencing a PT or PR state are equivalent for D1 at both points in time. Across dyads, D2 shows the highest odds of experiencing a PT state at T2 while D3 and D4 also show higher odds of a PT state at T2. D2 shows the lowest odds of experiencing a PR state. Although D1, D3, and D4 show higher odds of a PR state at T2, overall they are all more likely to exhibit a PT state.

CHAPTER FIVE

Study 3: Mutuality in Father-Son Interaction Using the Dyadic Parent-Child Interaction Coding System

This comparative study examines how the coding system for mutuality and the DPICS coding system compare. This study examines where DPICS Command Sequences punctuate interaction states and how DPICS Command Sequences distribute across these interaction states. A Command Sequence is comprised of a father's oral command to his child, and the child's subsequent response of compliance, non compliance, or no opportunity. Appendix B provides a definition of these terms. This analysis focuses specifically on the relationship between Command Sequence and Interaction State (Mutual State further defined by Activity and Focus).

Command Sequence data for this study were derived from the DPICS coding sheets discussed in Chapter 2. Interaction State data were derived from Study 2. This section first considers DPICS Command Sequences and looks at frequency and proportion data of Command Sequence at two points in time. This section next considers how Command Sequence distributes across Activity and Focus by looking at frequency and proportions of Command Sequence. The questions of interest in this study are:

RQ 1: How do DPICS Command Sequences distribute across Activity and Focus? To put another way, are DPICS codings non randomly associated with Activity and Focus?

RQ2: What can we gain from this comparative study that helps us understand differences in how fathers and sons are mutual with one another?

COMMAND SEQUENCES FOR FOUR DYADS

This section considers the overall distribution of Command Sequences for dyads (D1 – D4) at two points in time.

Command Sequences by Dyads

Table 5.1 reports the frequency and proportion of Command Sequences for four dyads (D1 – D4). As stated previously, only Command Sequences are examined in this research. The first part of a Command Sequences consists of a father's spoken command to the child, with the child's consequent action in the form of compliance, non compliance, or no opportunity the second part of the sequence. Time 1 is considered first.

Table 5.1

Frequency and Proportion of Command Sequences by Dyad and Time

	TIME 1	TIME 2	
	Command Sequences	Command Sequences	Total
Dyad 1	50 .27	37 .17	87 / .22
Dyad 2	57 .31	31 .14	88 / .22
Dyad 3	46 .25	37 .17	83 / .21
Dyad 4	29 .16	115 .52	144 / .36
Total	182 .45	220 .55	402 / 1.00 1.00

Time 1

As shown at the top of Table 5.1, there are 182 Command Sequence across dyads at T1. The frequency of Command Sequence range from 29 to 57 and range in proportion from 0.16 - 0.31 across dyads, with D4 the lowest proportion and least like the other three, each above the mean in Command Sequence.

Time 2

As shown in the bottom of Table 5.1, there are 220 Command Sequence across dyads at T2. The frequency of Command Sequence range from 31 to 115 and range in proportion from 0.14 - 0.52 across dyads, with D4 again the outlier. This time the highest proportion, three times that of the next dyad.

The high-low rank order of the dyads by proportion of Command Sequence at T1 and T2 is presented in Table 5.2. As shown, D2 is highest at T1 and lowest at T2 while D4 is lowest at T1 and highest at T2.

Table 5.2

Rank Order of Dyads by Proportion of Command Sequences

TIME 1	TIME 2
D2 – .31	D4 – .52
D1 – .27	D1 – .17
D3 – .25	D3 – .17
D4 – .16	D2 - .14

Statistical Test of the Observed Frequency of Command Sequence by Time and Dyad

A loglinear test of equiprobability of Command Sequence by Time, independent of Dyad, was significant [*Likelihood ratio chi-square* (L^2) = 66.21, *df* = 4, *p* = .000]. This indicates that the observed frequencies of Command Sequences at T1 and T2 differ statistically from expected frequencies at T1 and T2 when those expected frequencies are modeled under the assumption of equivalent frequencies at T1 and T2. A loglinear test of equiprobability of Command Sequence by Dyad, independent of Time, was significant [L^2 = 85.89, *df* = 6, *p* = .000]. This indicates that the observed frequencies of interaction states across Dyads (D1-D4) differ statistically from expected frequencies when expected frequencies are modeled under the assumption of equivalent frequencies across all four dyads. A loglinear test of independence of Dyad and Time was also significant [*Likelihood ratio chi-square* (L^2) = 62.81, *df* = 3, *p* = .00]. This indicates there is a Time-Dyad interaction effect in the observed in distribution of Command Sequence.

COMMAND SEQUENCE BY ACTIVITY AND FOCUS

This section considers the distribution of Command Sequence by Activity (Play/Not Play) and Focus (Task/Relational) for four dyads (D1 – D4) at two points in time.

Command Sequence by Activity

The frequency and proportion of Activity, defined as Play or Not Play is discussed first. Table 5.3 reports the frequency and proportion of Command Sequence by Activity across dyads at T1 and T2.

Table 5.3

Frequency and Proportion of Command Sequence by Activity (Play/Not Play) at T1 and T2

	ACTIVITY		
	PLAY	NOT PLAY	Total
T1	165 .91	17 .09	182 / .45
T2	197 .90	23 .10	220 / .55
	362 .90	40 .10	402 / 1.00 1.00

As shown in Table 5.3, Command Sequence is predominant and comparable during Play States at T1 and T2 collapsing across dyads. The proportion of play is comparable, although the frequency of Play States is 19 States higher at T2 than T1 if one assumes equal distribution of States by Time [402/ 2 = 201; 220 – 201 = 19].

A loglinear test of independence of Activity (Play/Not-Play) by Time, collapsing across levels of Dyad, was not significant [$L^2 = 3.55$, $df = 2$, $p = .169$]. Thus, the observed frequencies of Command Sequence across dyads by Time do not differ from the expected distribution of activity states generated under the assumption that the association between Time by Activity is equivalent to zero.

These data are now examined by dyad at T1 and T2. Table 5.4 reports the distribution of Play and Not Play by Dyad. Time 1 is considered first.

Table 5.4

Frequency and Proportion of Command Sequence by Dyad and Activity (Play/Not Play) at T1 and T2

	ACTIVITY		
	TIME 1		
	PLAY	NOT PLAY	Total
Dyad 1	38 .76	12 .24	50 / .27
Dyad 2	57 1.0	0 0.0	57 / .31
Dyad 3	45 .98	1 .02	46 / .25
Dyad 4	25 .86	4 .14	29 / .16
Total	165 .91	17 .09	182 / 1.00 1.00
	ACTIVITY		
	TIME 2		
	PLAY	NOT PLAY	Total
Dyad 1	33 .89	4 .11	37 / .17
Dyad 2	17 .55	14 .45	31 / .14
Dyad 3	37 1.0	0 0.0	37 / .17
Dyad 4	110 .96	5 .04	115 / .52
Total	197 .90	23 .10	220 / 1.00 1.00

The frequency of Command Sequence in Play shows considerable range (25 – 57) and proportion (0.76 – 1.0) at T1 (Table 5.4). Because Not Play States were rare overall, these reflect best the variability between dyads. Whereas two dyads had no play states between them, D1 differs distinctly with one quarter of Command Sequence in Not Play.

At T2, the frequency of Command Sequence in Play ranges from 33 – 110 and in proportion from 0.55 – 1.0 (Table 5.4). Three dyads decrease in Activity at T2 with only D4 showing an increase, a most dramatic increase at that, from 29 Command Sequence at T1 to 115 at T2. In addition, D2 shows a dramatic shift in the ratio of Command Sequence of Play to Not Play, while all commands occurred during Play at T1, a little more than half occurred in Play at T2. In contrast, the three other dyads show an increase in Play and a decrease in Not Play.

A loglinear test of independence for Activity by Dyad collapsing across levels of Time was significant [$L^2 = 22.03$, $df = 3$, $p = .000$]. This indicates significant interaction between Dyad and Activity in accounting for the observed distribution of Command Sequence. A comparable test with Time included in the terms of the model again showed significant Dyad Activity interaction [$L^2 = 63.34$, $df = 6$, $p = .000$]. This model shows the presence of a higher order Dyad by Activity by Time interaction effect. This is sensibly understood in terms of between dyad variability in overall Command Sequence and variability over time and variability in the relationship between Play and Not Play Activity States.

Compliance, Non Compliance, and No Opportunity by Activity

To this point only commands have been considered, that is the action of the father. The child's response to the father is now added to the analysis. Table 5.5 reports the distribution of child compliance, non compliance, and no opportunity collapsing across dyads by activity for T1with Table 5.6 reporting these distributions for each of four dyads.

Time 1

At T1 Compliance is the most common child response (106, 64%), with No Opportunity next (44, 24%) and Non Compliance least (17, 9%) (Table 5.5). During Not Play Compliance responses are even higher than during Play, although already noted Command Sequence are not common in Not Play overall.

Compliance ranges by dyad from .63 - .70 overall and .63 - .66 within Play. Focusing only on Play No Opportunity ranges by dyad from .14 - .26 with three dyads sharing the same proportion of .26. Finally, Non Compliance ranges in frequency from two instances to six instances in D2 and from .04 for D1 to .17 for D4 with five instances of non compliance.

Table 5.5

Compliance, Non Compliance, No Opportunity Across Dyads by Activity at T1

	ACTIVITY TIME 1		
Command	PLAY	NOT PLAY	Total
Compliance	106 .64	15 .88	121 / .66
Non Compliance	16 .10	1 .06	17 / .09
No Opportunity	43 .26	1 .06	44 / .24
Total	165 .91	17 .09	182 / 1.00 1.00

Table 5.6

Frequency and Proportion of Compliance, Non Compliance, and No Opportunity by Dyad and Activity (Play/Not Play) at T1

		TIME 1 ACTIVITY		
DYAD 1		PLAY	NOT PLAY	Total
	Compliance	25 .66	10 .83	35 / .70
	Non Compliance	1 .03	1 .08	2 / .04
	No Opportunity	12 .32	1 .08	13 / .26
	Total	38 .76	12 .24	50 / 1.00 1.00
DYAD 2		PLAY	NOT PLAY	Total
	Compliance	36 .63	0 0.0	36 / .63
	Non Compliance	6 .11	0 0.0	6 / .11
	No Opportunity	15 .26	0 0.0	15 / .26
	Total	57 1.0	0 0.0	57 / 1.00 1.00
DYAD 3		PLAY	NOT PLAY	Total
	Compliance	29 .64	1 1.0	30 / .65
	Non Compliance	4 .09	0 0.0	4 / .09
	No Opportunity	12 .27	0 0.0	12 /.26
	Total	45 .98	1 .02	46 / 1.00 1.00
DYAD 4		PLAY	NOT PLAY	Total
	Compliance	16 .64	4	20 / .69
	Non Compliance	5 .20	0 0.0	5 / .17
	No Opportunity	4 .16	0 0.0	4 / .14
	Total	25 .86	4 .14	29 / 1.00 1.00

Time 2

Table 5.7 reports the distribution of child compliance, non compliance, and no opportunity collapsing across dyads by activity for T1with Table 5.8 reporting these distributions for each of four dyads. At T2 Compliance is the most common child response (107, 54%), with No Opportunity next (77, 39%) and Non Compliance least (13, 7%) (Table 5.7). During Not Play Compliance responses are roughly the same as Play, 56%, although as was the case at T1 Command Sequence is not common in Not Play overall with only 10%. Now only the overall proportions will be discussed.

Compliance ranges by dyad from .43 - .88 overall. No Opportunity ranges by dyad from .03 - .53. Finally, Non Compliance ranges by dyad from .05 - .12. For one dyad, D4, No Opportunity is greater than Compliance. For D3 No Opportunity (.43) and Compliance (.49) are almost equal. D3 and D4 are remarkably distinct from D1 and D2 with these latter dyads exhibiting predominantly Compliance, .88 and .76 respectively for Play and .86 and .17 overall. Although it's already been noted that Not Play is rare, for D2 where no Command Sequence was associated with Play at T1, 45% of Command Sequence was associated with D2 at T2. For each of the other three dyads Command Sequence is less often associated with Not Play at T2.

Table 5.7

Compliance, Non Compliance, No Opportunity Across Dyads by Activity at T2

	ACTIVITY TIME 2		
Command	PLAY	NOT PLAY	Total
Compliance	107 .54	13 .56	120 / .55
Non Compliance	13 .07	2 .09	15 / .07
No Opportunity	77 .39	8 .35	85 / .39
Total	197 .90	23 .10	220 / 1.00 1.00

Table 5.8

Frequency and Proportion of Compliance, Non Compliance, and No Opportunity by Dyad and Activity (Play/Not Play) at T2

		TIME 2 ACTIVITY		
DYAD 1		PLAY	NOT PLAY	Total
	Compliance	29 .88	3 .75	32 / .86
	Non Compliance	3 .09	0 0.0	3 / .08
	No Opportunity	1 .03	1 .25	2 / .05
	Total	33	4	37
DYAD 2		PLAY	NOT PLAY	Total
	Compliance	13 .76	9 .64	22 / .71
	Non Compliance	2 .12	2 .14	4 / .13
	No Opportunity	2 .12	3 .21	5 / .16
	Total	17	14	31
DYAD 3		PLAY	NOT PLAY	Total
	Compliance	18 .49	0 0.0	18 / .49
	Non Compliance	3 .08	0 0.0	3 / .08
	No Opportunity	16 .43	0 0.0	16 / .43
	Total	37 1.0	0 0.0	37 / 1.00 1.00
DYAD 4		PLAY	NOT PLAY	Total
	Compliance	47 .43	1 .20	48 .42
	Non Compliance	5 .05	0 0.0	5 .04
	No Opportunity	58 .53	4 .80	62 .54
	Total	110 .96	5 .05	115 / 1.00 1.00

Command Sequence by Focus

Focus defined by levels of Task and Relational is now considered. Table 5.9 reports the frequency and proportion of Command Sequence by Focus collapsing across dyads at T1 and T2. As shown in Table 5.8 the distribution of Command Sequence was more comparable at the two levels of Focus with 61% during Task and 39% during Relational when compared to Activity where 90% were Play and 10% with Not Play. In addition there appears to be an interaction effect of Time and Focus for Command Sequence with Relational greater at T1 (.63) and Task (.80) greater at T2. A loglinear test of independence of Focus (Task/Relational) by Time, collapsing across Dyad confirms this impression [$L^2 = 80.89$, $df = 1$, $p = .000$].

These data are now examined by Dyad at T1 and T2. Table 5.10 reports the distribution of Task and Relational by Dyad for each time point.

Table 5.9

Frequency and Proportion of Command Sequence by Focus (Task/Relational) at T1 and T2

	FOCUS		
	TASK	RELATIONAL	Total
T1	67 .37	115 .63	182 / .45
T2	177 .80	43 .20	220 / .55
Total	244 .61	158 .39	402 / 1.00 1.00

Table 5.10

Frequency and Proportion of Command Sequence by Dyad and Focus (Task/Relational) at T1 and T2

FOCUS

TIME 1

	TASK	RELATONAL	Total
Dyad 1	11 .22	39 .78	50 / .27
Dyad 2	7 .12	50 .88	57 / .31
Dyad 3	24 .52	22 .48	46 /.25
Dyad 4	25 .86	4 .14	29 / .16
Total	67 .37	115 .63	182 / 1.00 1.00

FOCUS

TIME 2

	TASK	RELATONAL	Total
Dyad 1	12 .32	25 .68	37 / .17
Dyad 2	25 .81	6 .19	31 / .14
Dyad 3	32 .86	5 .14	37 / .17
Dyad 4	108 .94	7 .06	115 / .52
Total	177 .80	43 .20	220 / 1.00 1.00

At T1, the frequency of Command Sequence in Task shows considerable range (7 – 25) and proportion (.12 - .86). The range for Relational was even larger in frequency (4 – 50) and proportion from (.14 - .88). D4 is predominantly Task oriented. D3 is comparable in terms of Task and Relational and D1 and D2 predominantly Relational oriented. Thus dyads vary considerably in the relative balance of Command Sequence in association to Task and Relational States of Focus.

At T2, the frequency of Command Sequence in Task shows considerable range (12 – 108) and proportion (.32 - .94). The range of frequency for Relational (5 – 25) and proportion (.06 - .68). At T2 D1 is distinct from the other three dyads in the ratio of Task to Relational Command Sequence with roughly .66 of Command Sequences Relational for D1. In contrast, over 80% of Command Sequence is in Task State for each of the other three dyads. Finally, comparing T1 and T2 the ratio of Task to Relational Command Sequence is roughly comparable for D1 with predominantly Relational both times. Similarly, the ratio of Command Sequence for D4 are comparable at T1 and T2, predominantly Task at both times. The greatest change from T1 to T2 in the relative association of Command Sequence with either Task or Relational States is shown for D2 and D3.

Not surprisingly, a loglinear test of independence for Focus by Dyad, collapsing across Time was significant [$L^2 = 139.45$, $df = 3$, $p = .000$]. This indicates significant interaction between Dyad and Focus in accounting for the observed distribution of Command Sequence. A comparable test with Time included in the terms of the Model again showed significant interaction between Dyad and Focus [$L^2 = 113.53$, $df = 6$, p

= .000]. The test of this model shows the presence of a higher order Dyad by Focus by Time interaction effect.

Compliance, Non Compliance, and No Opportunity by Focus

As was the case in the analysis of Command Sequence by Activity, only the relationship of fathers' Command Sequence has been considered. The child's response to the father is now added to the analysis. Table 5.10 reports the distribution of child compliance, non compliance, and no opportunity collapsing across dyads by activity for T1 with Table 5.12 reporting these distributions for each of four dyads.

Time 1

At T1, Compliance occurs more often during a Relational (71) than Task (50) Focus State, but Compliance occurs proportionally more often during a Task State (.74) than a Relational State (.62). No Opportunity and Non Compliance are also more frequent in Relational than Task State. No Opportunity occurs .29 in Relational State and .15 in Task State while Non Compliance is proportionally comparable in Task and Relational State, .10 and .09 respectively (Table 5.11).

Recall that compliance ranges by dyad from .63 - .70 overall, from .64 - .86 by Task, and from .50 - .72 by Relational. No Opportunity ranges from .08 - .36 by Task and from .23 - .45 by Relational. Because of skewing that exists in Task and Relational by dyad further discussion of individual Command Sequence responses is unwarranted.

Table 5.11

Compliance, Non Compliance, No Opportunity Across Dyads by Focus at T1

	FOCUS TIME 1		
Command	TASK	RELATIONAL	Total
Compliance	50 .74	71 .62	121 / .66
Non Compliance	7 .10	10 .09	17 / .09
No Opportunity	10 .15	34 .29	44 / .24
Total	67 .37	115 .63	182 / 1.00 1.00

Table 5.12

Frequency and Proportion of Compliance, Non Compliance, and No Opportunity by Dyad and Focus (Task/Relational) at T1

		TIME 1 FOCUS		
DYAD 1		TASK	RELATIONAL	Total
	Compliance	7 .64	28 .72	35 / .70
	Non Compliance	0 0.0	2 .05	2 / .04
	No Opportunity	4 .36	9 .23	13 / .26
	Total	11 .22	39 .78	50 / 1.00
DYAD 2		TASK	RELATIONAL	Total
	Compliance	6 .86	30 .60	36 / .63
	Non Compliance	0 0.0	6 .12	6 / .11
	No Opportunity	1 .14	14 .28	15 / .26
	Total	7 .12	50 .88	57 / 1.00 1.00
DYAD 3		TASK	RELATIONAL	Total
	Compliance	19 .79	11 .5	30 / .65
	Non Compliance	3 .13	1 .05	4 / .09
	No Opportunity	2 .08	10 .45	12 / .26
	Total	24 .52	22 .48	46 / 1.00 1.00
DYAD 4		TASK	RELATIONAL	Total
	Compliance	18 .72	2 .50	20 / .69
	Non Compliance	4 .16	1 .25	5 / .17
	No Opportunity	3 .12	1 .25	4 / .14
	Total	25 .86	4 .14	29 / 1.00 1.00

Time 2

At T2, Compliance occurs more often during a Task (90) than Relational (30) Focus State, but Compliance occurs proportionally more often during a Relational State (.70) than a Task State (.51). No Opportunity occurs more frequently in a Task State (78) and more proportionally (.44). Non Compliance occurs more frequently in a Task State (9) but proportionally more in a Relational State (.14) (Table 5.13).

Compliance ranges from .41 - .92 by Task and from .14 - .1.0 by Relational. Recall that only D1 included a significant number of Command Sequence in a Relational State. For D1 .84 of Command Sequence result in Compliance in a Relational State and .92 in a Task State due to the small frequency of Command Sequence for D2 – D4 these are not further summarized.

Of major import with the exception of D1 is the shift of Command Sequence to Task for D2 and D3. At T1, No Opportunity was negligible for D3 and D4 with Compliance accounting for more than 70% of Command Sequence. However at T2, No Opportunity was more common than Compliance accounting for more than half of commands for both D3 and D4.

The wide ranging proportion of Compliance for Relational State reflects the impact of this infrequent association with D4 the bottom and top of the range identified. No Opportunity ranges from .08 - .36 by Task and from .23 - .45 by Relational. Because of skewing that exists in Task and Relational by dyad further discussion of individual Command Sequence responses is unwarranted.

Table 5.13

Compliance, Non Compliance, No Opportunity Across Dyads by Focus at T2

	FOCUS TIME 2		
Command	TASK	RELATIONAL	Total
Compliance	90 .51	30 .70	120 .55
Non Compliance	9 .05	6 .14	15 .07
No Opportunity	78 .44	7 .16	85 .39
Total	177	43	220

Table 5.14

Frequency and Proportion of Compliance, Non Compliance, and No Opportunity by Dyad and Focus (Task/Relational) at T2

		TIME 2 FOCUS		
DYAD 1		TASK	RELATIONAL	Total
	Compliance	11 .92	21 .84	32 / .86
	Non Compliance	0 0.0	3 .12	3 / .08
	No Opportunity	1 .08	1 .04	2 / .05
	Total	12 .32	25 .68	37 / 1.00 1.00
DYAD 2		TASK	RELATIONAL	Total
	Compliance	19 .76	3 .50	22 / .71
	Non Compliance	2 .08	2 .33	4 / .13
	No Opportunity	4 .16	1 .17	5 / .16
	Total	25 .81	6 .19	31 / 1.00 1.00
DYAD 3		TASK	RELATIONAL	Total
	Compliance	13 .41	5 1.0	18 / .49
	Non Compliance	3 .09	0 0.0	3 / .08
	No Opportunity	16 .50	0 0.0	16 / .43
	Total	32 .86	5 .14	37 / 1.00 1.00
DYAD 4		TASK	RELATIONAL	Total
	Compliance	47 .43	1 .14	48 / .42
	Non Compliance	4 .04	1 .14	5 / .04
	No Opportunity	57 .53	5 .71	62 / .54
	Total	108 .94	7 .06	115 / 1.00 1.00

Summary of Findings

The analyses show that Interactional States account for differences in the distribution of Command Sequences. The relation of Activity and Focus to the distribution of Command Sequences is not straightforward. In each case a Dyad interaction was found. This was at the level of the parent command and the level of the child response also.

In sum, Study 3 shows that Interaction States account for differences in how Command Sequences distribute across dyads. The distribution of Command Sequences is a function of Dyad differences. Each dyad experiences qualities of mutuality differently, and Mutuality is is relationship specific and varies within and across dyads.

The subsequent section looks at Interaction States that result from combing Activity and Focus levels. This will assist in clarifying some of the effects identified in the analyses reported so far.

COMMAND SEQUENCE DISTRIBUTED ACROSS INTERACTION STATES

Table 5.15 reports the frequency and proportion of Command Sequences within Interaction States for four dyads (D1 – D4) at T1 and T2. The frequency of commands in a PT State ranged from 7 – 23. The frequency of commands in a PR State ranged from 3 – 50. The frequency of Command Sequences in a T state ranged from 0 - 4 , and the frequency of Command Sequences in a PR State ranged from 0 – 8.

The frequency of Command Sequences at T2 in a PT State ranged from 12 - 103. The frequency of Command Sequences in a PR State ranged from 0 - 21. The frequency of Command Sequences in a T State ranged from 0 - 8 and the frequency of Command Sequences in a PR State ranged from 0 – 6.

At T1, the proportion of Command Sequences in a PT State ranged from .12 - .76. The proportion of Command Sequences in a PR State ranged from .10 - .88. The proportion of Command Sequences in a T State ranged from 0 - .10. The proportion of Command Sequences in an R State ranged from 0 - .16.

At T2, the proportion of Command Sequences in a PT State ranged from .32 - .90. The proportion of Command Sequences in a PR State ranged from 0 - .57. The frequency of Command Sequences in a T state ranged from 0 - .26. The proportion of Command Sequences in an R State ranged from 0 - .19.

Table 5.15

Distribution of DPICS Command Sequences Within Interaction States

TIME 1

Interaction States	PT	PR	T	R	Total
Dyad 1	7 .14	31 .62	4 .08	8 .16	50
Dyad 2	7 .12	50 .88	0 0	0 0	57
Dyad 3	23 .50	22 .48	1 .02	0 0	46
Dyad 4	22 .76	3 .10	3 .10	1 .03	29
Total	59 .32	106 .58	8 .04	9 .05	182

TIME 2

Interaction States	PT	PR	T	R	Total
Dyad 1	12 .32	21 .57	0 0	4 .11	37
Dyad 2	17 .55	0 0	8 .26	6 .19	31
Dyad 3	32 .86	5 .14	0 0	0 0	37
Dyad 4	103 .90	7 .06	5 .04	0 0	115
Total	164 .75	33 .15	13 .06	10 .05	220

The high-low rank order of proportion of Command Sequences by interaction States at T1 and T2 is presented in Table 5.16.

Table 5.16

Rank Order of Dyads by Proportion Command Sequences Within Interaction States

TIME 1

PT	PR	T	R
D4 – .76	D2 – .88	D4 – .10	D1 – .16
D3 – .50	D1 – .62	D1 – .08	D4 – .03
D1 – .14	D3 – .48	D3 – .02	D2 – 0
D2 – .12	D4 – .10	D2 – 0	D3 – 0

TIME 2

PT	PR	T	R
D4 – .90	D1 – .57	D2 – .26	D2 – .19
D3 – .86	D3 – .14	D4 – .04	D1 – .11
D2 – .55	D4 – .06	D1 – 0	D3 – 0
D1 – .32	D2 – 0	D3 – 0	D4 – 0

As shown, has the highest proportion of Command Sequences in a PT State and the lowest in a PR State at T1. D2 has the highest proportion of Command Sequences in a PR State and the lowest in a PT State at T1. D3 is comparable across PT and PR States at T1 while D1 shows the greatest variation in Command Sequences across PT and PR States, with the higher proportion occurring during a PR State at T1. Across non-play States, T and R respectively, D4 and D1 have the highest proportion of Command Sequences in a T State at T1 while D1 has the highest proportion of Command Sequences in an R State.

At T2, D4 has the highest proportion of Command Sequences in a PT State and is ranked third in Command Sequences in a PR State, showing only a slightly higher proportion of Command Sequences than D2 who shows no Command Sequences during a PR State at T2. D1 has the lowest proportion of Command Sequences in a PT State and the highest proportion in a PR State at T2. Where D3 was comparable in Command Sequences across PT and PR States at T1, at T2 they show significant variation with the highest proportion of Command Sequences occurring during a PT State.

Of interest is D2 who at T1 showed a very high proportion of Command Sequences occurring during a PR State and at T2 showed zero instances of a command sequence during a PR State. During non-play States, T and R respectively, D2 shows the highest proportion of Command Sequences of across all dyads at T1 and T2. If D2's T and R States were combined, their proportion of Command Sequences is .45.

Command Sequences within Dyads Over Time

Table 5.17 shows the proportion of Command Sequences within four dyads (D1-D4) at T1 and T2. These data show that at T1 D1 – D3 have higher proportions of Command Sequences during a PR State and only D4 showed a higher proportion of Command Sequences during a PT State. At T1, only D1 a higher proportion of Command Sequences occurring during a PR State. D2 – D4 had higher proportions of Command Sequences occurring during a PT State.

D1 and D4 have an inverse relationship. That is, D1 has higher proportions of Command Sequences during PR States while D4 has higher proportions of Command Sequences during PT States over time. D2 and D3 show the greatest variation in proportions of command sequences. At T1, D2 shows a preference for Command Sequences to occur during a PR State while at T2 the majority of Command Sequences occur during a PT State. At T1, D3 is comparable in Command Sequences across PT and PR States, however, at T2 the proportion of Command Sequences in a PT State is higher.

Table 5.17

Within Dyad Comparison of Proportion of Command Sequences Across Interactions States

	Interaction States							
	PT		PR		T		R	
	T1	T2	T1	T2	T1	T2	T1	T2
Dyad 1	.14	.32	.62	.57	.08	0	.16	.11
Dyad 2	.12	.55	.88	0	0	.26	0	.19
Dyad 3	.50	.86	.48	.14	.02	0	0	0
Dyad 4	.76	.90	.10	.06	.10	.04	.03	0

Summary of Proportion of Command Sequence across Interaction States

The purpose of this section was to show how DPICS Command Sequences distributed across Interaction States at two points in time, 15 months apart. The results show that across dyads Command Sequences occur most often in PT and PR States. At T1 PT States show the highest proportion of Command Sequences while at T2 the pattern reverses with the PR States showing the highest proportion of Command Sequences. That is, over time the proportion of Command Sequences increase during a PT State and decrease during a PR State.

D1 shows the highest proportion of Command Sequences occurring during a PR State at T1 and T2. The child in D1 seems to be developmentally advanced and is able to cooperate, collaborate, and sustain focus during play activities. That is, he and his father are able to make collaborative decisions about what to do and how to do it. This child is more verbal than the children in the other dyads and consequently perhaps better able to manage the relational demands of pursuing an activity with another.

D2 and D3 show extremes in the distribution of command sequences. For D2 at T1, the proportion of Command Sequences was higher in a PR State while during T2 there were no Command Sequences during a PR State. This could be a task effect. During T2, the play activity is structured so that there is less collaboration between this father and son.

D3 shows the widest range in the distribution of Command Sequences across PT and PR States at T2, although at T1 they were nearly equivalent. During T2, the proportion of Command Sequences was significantly higher during a PT State than a PR State. As with D2, this could also be a task effect. At T1, this dyad was more collaborative in their approach to the activity. At T2, the son put together a puzzle while his father looked on. Though engaged in his son's activity, the father's engagement was more in the form of surveilling and monitoring what his son was doing.

Finally, D4 has the highest proportion of Command Sequences at T1 and T2 in a PT State. D4 shows very small proportions of Command Sequences occurring during a PR State at either time. This could be a developmental and task effect. The child in this study appears developmentally younger than all the other children. That is, he is physically smaller, has less expressive and receptive language skills, and less motor coordination than the other children. The combination of these may make him less able to be mutual with his father on the relational level and only exhibit mutuality in the *doing* of the task rather than the planning or negotiation of the task.

DISTRIBUTION OF COMPLIANCE, NON COMPLIANCE, AND NO OPPORTUNITY ACROSS INTERACTION STATES

This section discusses how command sequences, namely compliance, non compliance, and no opportunity distributed across interaction States at T1 and T2. Tables 5.24 and 5.31 below report summary frequency and proportion data for DPICS command sequences, namely compliance, non compliance, and no opportunity, distributed across four dyads (D1 – D4) at Time 1 and Time 2. The data in these table are deconstructed to show how Command Sequences link to interaction States across dyads.

To facilitate and organize discussion of these data, this section will discuss each command sequence, namely compliance, non compliance, and no opportunity across dyads by interaction States first at Time 1 and then at Time 2. Finally summary statements regarding these data will be presented.

Compliance by Interaction State at Time 1

Table 5.18 reports the frequency and proportion of compliance for four dyads (D1 – D4) at T1. The frequency of compliance by dyad range from 20 - 36. The frequency of compliance by State range from 7 – 63. The proportion of compliance, range from a high of .70 to a low of .63. The proportion of compliance by interaction States range from a high of .52 to a low of .06.

Table 5.18

Distribution of Compliance Across Interaction States at Time 1

	Compliance Interaction States					
	PT	PR	T	R	Total	Total Command Sequences
Dyad 1	4 .08	21 .42	3 .06	7 .14	35 .70	50
Dyad 2	6 .11	30 .53	0 0	0 0	36 .63	57
Dyad 3	18 .39	11 .24	1 .02	0 0	30 .65	46
Dyad 4	15 .52	1 .03	3 .10	1 .03	20 .69	29
Total	43 .35	63 .52	7 .06	8 .07	121 .66	182

As shown, the frequency of compliance in a PT State ranged from 4 - 18. The frequency of compliance in a PR State ranged from 1 -30. The frequency of compliance in a T State ranged from 1 - 3. The frequency of compliance in an R State ranged from 0 - 7.

Looking at proportions, the proportion of compliance in a PT State ranged from a high of .52 to a low of .08. The proportion of compliance in a PR State ranged from a high of .53 to a low of .03. The proportion of compliance in a T State ranged from a high of .10 to a low of 0. The proportion of compliance in an R State ranged from a high of .14 to a low of 0.

Rank Order of Dyads by Proportion of Compliance -T1

Table 5.19 shows the rank order of dyads by proportion of compliance across interaction States at T1. D4 had the highest proportion of compliance in a PT State and the lowest in a PR State. The broad range for this dyad suggests more focus on practical dimensions of play than on the relational. D2 had the highest proportion of compliance in a PR State. D2's range was also broad, but unlike D4, D2's broad range suggests greater attendance on the relational dimensions of play. D1 was ranked last in proportion of PT States and second in proportion of PR States. They also have a wide range that suggests greater attendance to the relational dimensions of play.

Table 5.19

Rank Order of Dyads by Proportion of Compliance Within Interaction States

Compliance T1			
Interaction States			
PT	PR	T	R
D4: .52	D2: .53	D4: .11	D1: .14
D3: .39	D1: .42	D1: .06	D4: .03
D2: .11	D3: .24	D3: .02	D2: 0
D1: .08	D4: .03	D2: 0	D3: 0

Non Compliance by Interaction State at Time 1

Table 5.20 reports the frequency and proportion of non compliance for four dyads (D1 – D4) at T1. The frequency of non compliance by dyad range from 2 – 6. The frequency of non compliance by State range from 0 -9. The proportion of non compliance by dyad ranged from a high of .17 to a low of .04. The proportion of non compliance by State range from a high of .53 to a low of 0.

Table 5.20

Distribution of Non Compliance Across Interaction States at Time 1

	Non Compliance					
	Interaction States					
	PT	PR	T	R	Total	Total Command Sequences
Dyad 1	0 0	1 .02	0 0	1 .02	2 .04	50
Dyad 2	0 0	6 .11	0 0	0 0	6 .11	57
Dyad 3	3 .07	1 2.2	0 0	0 0	4 .09	46
Dyad 4	4 .14	1 .03	0 0	0 0	5 .17	29
Total	7 .41	9 .53	0 0	1 .06	17 .09	182

As shown, the frequency of non compliance in a PT State ranged from 0 - 4. The frequency of non compliance in a PR State ranged from 1 -6. The frequency of non compliance in a T State was zero. The frequency of non compliance in an R State ranged from 0 -1.

Looking at proportions, the proportion of non compliance in a PT State ranged from a high of .14 to a low of 0. The proportion of non compliance in a PR State ranged from a high of .11 to a low of .02. The proportion of non compliance in a T State was zero. The proportion of non compliance in an R State ranged from a high of .02 to a low of 0.

Rank Order of Dyads Proportion of Non Compliance – T1

Table 5.21 shows the rank order of dyads by proportion of non compliance at T1. D4 had the highest proportion of non compliance in a PT State and had the highest proportion of non compliance overall. D2 had the highest proportion of non compliance in a PR State and was ranked second in non compliance overall. The proportion of non compliance for D1 and D3 was equivalent. Overall, the small proportion of non compliance suggests that all dyads exhibited more compliance than non compliance.

Table 5.21

Rank Order of Dyads by Proportion Non Compliance Within Interaction States

Non Compliance T1			
Interaction States			
PT	PR	T	R
D4: .14	D2: .11	D1: 0	D1: .02
D3: .07	D4: .03	D2: 0	D2: 0
D1: 0	D3: .02	D3: 0	D3: 0
D2: 0	D1: .02	D4: 0	D4: 0

No Opportunity by Interaction State at Time 1

Table 5.22 reports the frequency and proportion of no opportunity for four dyads (D1 – D4) at T1. The frequency of no opportunity by dyad range from 4 – 15. The frequency of no opportunity by State range from 0 - 34. The proportion of no opportunity by dyad range from a high of .26 to a low of .14. The proportion of no opportunity by State range from a high of .77 to a low of 0.

Table 5.22

Distribution of No Opportunity Across Interaction States at Time 1

	No Opportunity Interaction States					
	PT	PR	T	R	Total	Total Command Sequences
Dyad 1	3 .06	9 .18	1 .02	0 0	13 .26	50
Dyad 2	1 .02	14 .25	0 0	0 0	15 .26	57
Dyad 3	2 .04	10 .22	0 0	0 0	12 .26	46
Dyad 4	3 .10	1 .03	0 0	0 0	4 .14	29
Total	9 .20	34 .77	1 .02	0 0	44 .24	182

As shown, the frequency of no opportunity in a PT State ranged from 1 - 3. The frequency of no opportunity in a PR State ranged from 1 -14. The frequency of no opportunity compliance in a T State ranged from 0 - 1. The frequency of no opportunity in an R State was zero for all dyads. Overall, frequency of no opportunity for D1 – D3 was equivalent.

Looking at proportions, the proportion of no opportunity in a PT State ranged from a high of .10 to a low of .02. The proportion of no opportunity in a PR State ranged from a high of .25 to a low of .03. The proportion of no opportunity in a T State ranged from a high of .02 to a low of 0. The proportion of no opportunity in an R State was zero.

Rank Order of Dyads Proportion of No Opportunity – T1

Table 5.23 shows the rank order of dyads by proportion of no opportunity at T1. During a PT State, D4 had the highest proportion of no opportunity and the lowest proportion during a PR State. D2 had the lowest proportion of no opportunity in a PT State and the highest proportion in PR State. D1 and D3 were comparable in proportion of no opportunity in a PR State and also comparable in proportion of no opportunity in a PT State.

Table 5.24 consolidates frequency and percentage data for Command Sequences across interaction States at Time 1.

Table 5.23

Rank Order of Dyads by Proportion of No Opportunity Within Interaction States

No Opportunity T1			
Interaction States			
PT	PR	T	R
D4: .10	D2: .25	D1: .02	D1: 0
D3: .04	D3: .22	D2: 0	D2: 0
D1: .06	D1: .18	D3: 0	D3: 0
D2: .02	D4: .03	D4: 0	D4: 0

Table 5.24

Consolidated Frequency and Proportion of Command Sequences Across Interaction States at Time 1

		TIME 1				
		Interaction Units				
DYAD 1	N = 50	PT	PR	T	R	Total
	Compliance	4	21	3	7	35
		.08	.42	.06	.14	.70
	Non Compliance	0	1	0	1	2
		0	.02	0	.02	.04
	No Opportunity	3	9	1	0	13
		.06	.18	.02	0	.26
DYAD 2	N = 57	PT	PR	T	R	Total
	Compliance	6	30	0	0	36
		.11	.53	0	0	.63
	Non Compliance	0	6	0	0	6
		0	.11	0	0	.11
	No Opportunity	1	14	0	0	15
		.18	.25	0	0	.26
DYAD 3	N = 46	PT	PR	T	R	Total
	Compliance	18	11	1	0	30
		.39	24	2.2	0	/65
	Non Compliance	3	1	0	0	4
		.07	.02	0	0	.09
	No Opportunity	2	10	0	0	12
		.04	.22	0	0	.26
DYAD 4	N =29	PT	PR	T	R	Total
	Compliance	15	1	3	1	20
		.52	.03	.10	.03	69
	Non Compliance	4	1	0	0	5
		.14	.03	0	0	17
	No Opportunity	3	1	0	0	4
		.10	.03	0	0	14

Compliance by Interaction State at Time 2

Table 5.25 reports the frequency and proportion of compliance for four dyads (D1 – D4) at T2. The frequency of compliance by dyad range from 18 - 48. The frequency of compliance by State range from 6 - 83. The proportion of compliance by dyad range from a high of .86 to a low of .42. The proportion of compliance by State range from a high of .69 to a low of .05.

Table 5.25

Distribution of Compliance Across Interaction States at Time 2

	Compliance					
	Interaction States					
	PT	PR	T	R	Total	Total Command Sequences
Dyad 1	11 .30	18 .49	0 0	3 .08	32 .86	37
Dyad 2	13 .42	0 0	6 .19	3 .10	22 .71	31
Dyad 3	13 .35	5 .14	0 0	0 0	18 .49	37
Dyad 4	46 .40	1 .009	1 .009	0 0	48 .42	115
Total	83 .69	24 .20	7 .06	6 .05	120 .55	220

As shown, the frequency of compliance in a PT State ranged from 11 - 46. The frequency of compliance in a PR State ranged from 0 - 18. The frequency of compliance in a T State ranged from 0 - 6. The frequency of compliance in an R State ranged from 0 - 3.

Looking at proportions, overall, D1 had the highest proportion of compliance and D4 the lowest. The proportion of compliance in a PT State ranged from a high of .42 to a low of .30. The proportion of compliance in a PR State ranged from a high of .49 to a low of 0. The proportion of compliance in a T State ranged from a high of .19 to a low of 0. The proportion of compliance in an R State ranged from a high of .10 to a low of 0.

Rank Order of Dyads by Proportion of Compliance – T2

Table 5.26 shows the rank order of dyads by proportion of compliance at T2. D2 had the highest proportion of compliance in a PT State but only slightly higher than D4. D1 had the lowest proportion of compliance in a PT State, and the highest proportion of compliance in a PR State. D2 exhibited zero compliance in a PR State. D2 had the highest proportion of compliance in non-play States and when combined, compliance in a non-play is comparable to compliance in a PT State.

Table 5.26

Rank Order of Dyads By Percentage of Compliance Within Interaction States

Compliance T2			
Interaction States			
PT	PR	T	R
D2: .42	D1: .49	D2: .19	D2: .10
D4: .40	D3: .14	D4: .009	D1: .08
D3: .35	D4: .009	D1: 0	D3: 0
D1: .30	D2: 0	D3: 0	D4: 0

Non Compliance by Interaction State at Time 2

Table 5.27 reports the frequency and proportion of non compliance for four dyads (D1 – D4) at T2. The frequency of non compliance by dyad range from 3 – 5. The frequency of non compliance by State range from 0 - 9. The proportion of non compliance by dyad ranged from a high of .13 to a low of .04. The proportion of non compliance by State range from a high of .60 to a low of 0.

Table 5.27

Distribution of Non Compliance Across Interaction States at Time 2

	Non Compliance Interaction States					
	PT	PR	T	R	Total	Total Command Sequences
Dyad 1	0 0	3 .08	0 0	0 0	3 .08	37
Dyad 2	2 .06	0 0	0 0	2 .06	4 .13	31
Dyad 3	3 .08	0 0	0 0	0 0	3 .08	37
Dyad 4	4 .03	1 .009	0 0	0 0	5 .04	115
Total	9 .60	4 .27	0 0	2 .13	15 .07	220

As shown, the frequency of non compliance in a PT State ranged from 0 - 4. The frequency of non compliance in a PR State ranged from 0 -3. The frequency of non compliance in a T State was zero. The frequency of non compliance in an R State ranged from 0 -2. D2 - D 4 were comparable in non compliance in PT State. D1 had the highest non compliance in a PR State and D2 - D3 the lowest.

Looking at proportions, the proportion of non compliance in a PT State ranged from a high of .08 to a low of 0. The proportion of non compliance in a PR State ranged from a high of .08 to a low of 0. The proportion of non compliance in a T State was zero. The proportion of non compliance in an R State ranged from a high of .02 to a low of 0.

Rank Order of Dyads by Proportion of Non Compliance – T2

Table 5.28 shows the rank order of dyads by frequency of non compliance at T2. D3 had the highest proportion of non compliance in a PT and D1 had the highest proportion of non compliance in a PR State. D2 was ranked second followed by D3 and D1. Within a PR State, D1's proportion of non compliance was significantly higher than the other three dyads. D2 – D4 show very low proportions of non compliance in a PR State at T2.

Table 5.28

Rank Order of Dyads By Proportion of Non Compliance Within Interaction States

Non Compliance T2			
Interaction States			
PT	PR	T	R
D3: .08	D1: .08	D1: 0	D2: .06
D2: .06	D4: .009	D2: 0	D1: 0
D4: .03	D2: 0	D3: 0	D3: 0
D1: 0	D3: 0	D4: 0	D4: 0

No Opportunity by Interaction State at Time 2

Table 5.29 reports the frequency and proportion of no opportunity for four dyads (D1 – D4) at T1. The frequency of no opportunity by dyad range from 2 – 62. The frequency of no opportunity by State range from 2 - 72. The proportion of no opportunity by dyad range from a high of .54 to a low of .05. The proportion of no opportunity by State range from a high of .85 to a low of .02. The expanded ranges are attributable to D4.

Table 5.29

Distribution of No Opportunity Across Interaction States at Time 2

	No Opportunity Interaction States					
	PT	PR	T	R	Total	Total Command Sequences
Dyad 1	1 .03	0 0	0 0	1 .03	2 .05	37
Dyad 2	2 .06	0 0	2 .06	1 .03	5 .16	31
Dyad 3	16 .43	0 0	0 0	0 0	16 .43	37
Dyad 4	53 .46	5 .04	4 .03	0 0	62 .54	115
Total	72 .85	5 .06	6 .07	2 .02	85 .39	220

As shown, the frequency of no opportunity in a PT State ranged from 1 - 53. The frequency of no opportunity in a PR State ranged from 0 -5. The frequency of no opportunity compliance in a T State ranged from 0 - 4. The frequency of no opportunity in an R State range from 0 – 1.

Looking at proportions, the percentage of no opportunity in a PT State ranged from a high of .46 to a low of .03. The proportion of no opportunity in a PR State ranged from a high of .04 to a low of 0. The proportion of no opportunity in a T State ranged from a high of .06 to a low of 0. The proportion of no opportunity in an R State ranged from a high of .03 to a low of 0.

Rank Order of Dyads by Proportion of No Opportunity – T2

Table 5.30 shows the rank order of dyads by proportion of no opportunity at T2. During a PT State, D4 had the highest proportion of no opportunity and D3 was comparable. D4 also had the highest proportion of no opportunity in a PR State. D1 – D3 had zero no opportunity in a PR State at T2. Overall, D4 had the highest frequency and the highest proportion of no opportunity at T2.

Table 5.31 consolidates frequency and percentage data for Command Sequences across interaction States at Time 2.

Table 5.30

Rank Order of Dyads by Proportion of No Opportunity Within Interaction States

No Opportunity T2			
Interaction States			
PT	PR	T	R
D4: .46	D4: .04	D2: .03	D1: .03
D3: .43	D1: 0	D4: .03	D2: .03
D2: .06	D2: 0	D1: 0	D3: 0
D1: .03	D3: 0	D3: 0	D4: 0

Table 5.31

Consolidated Frequency and Proportion of Command Sequences Across Interaction States at Time 2

		TIME 2				
		Interaction States				
DYAD 1	N = 37	PT	PR	T	R	Total
	Compliance	11	18	0	3	32
		.30	.49	0	.08	.86
	Non Compliance	0	3	0	0	3
		0	.08	0	0	.08
	No Opportunity	1	0	0	1	2
		.03	0	0	.03	.05
DYAD 2	N = 31	PT	PR	T	R	Total
	Compliance	13	0	6	3	22
		.42	0	.19	.10	.71
	Non Compliance	2	0	0	2	4
		.06	0	0	.06	.13
	No Opportunity	2	0	2	1	5
		.06	0	.06	.03	.16
DYAD 3	N = 37	PT	PR	T	R	Total
	Compliance	13	5	0	0	18
		35	13.5	0	0	.49
	Non Compliance	3	0	0	0	3
		8	0	0	0	.08
	No Opportunity	16	0	0	0	16
		43	0	0	0	.43
DYAD 4	N = 115	PT	PR	T	R	Total
	Compliance	46	1	1	0	48
		.40	.009	.009	0	.42
	Non Compliance	4	1	0	0	5
		.03	.009	0	0	.04
	No Opportunity	53	5	4	0	62
		.46	.04	3.5	0	.54

Summary of Compliance, Non Compliance, and No Opportunity

The purpose of this section was to examine how command sequences, namely compliance, non compliance, and no opportunity distribute across interaction States. Overall, the proportion of compliance is the highest across Command Sequences for all dyads at T1 and T2. Looking at Interaction States, at T1 the proportion of compliance during a PT State increases over time from .35 to .69 while the proportion of compliance in a PR decreases over time from .52 to .20. This suggests that at T2, 15 months later, the children in this study are perhaps beginning to exert autonomy and independence from their parents in the pursuit of an activity.

Non compliance is comparable over time. The proportion of non compliance is higher in a PR State at T1 and higher in a PT State at T2. Overall, the proportion of non compliance at T1 and T2 is quite low compared to compliance and no opportunity. Nonetheless, the non compliance data suggest that perhaps at T1 the children in this study are too young to comprehend moves in talk that invite participation or that the children are developmentally still too young to suppress egocentrism and comply with requests for collaboration and cooperation. The increase in non compliance in PT States at T2 suggests that perhaps that some elements of the task were just beyond the child's ability.

The proportion of no opportunity increases over time from .24 to .39. This increase is attributable to two dyads, D3 and D4. With regard to D3, their proportion of no opportunity increased from .26 at T1 to .43 at T2. The increase in no opportunity over time could be attributed to the task. At T1 and T2 the task was completing a puzzle. However, at T1 there was more collaboration between the father and the son as shown by the higher proportions of Command Sequences occurring in a PR State and the overall smaller proportion of no opportunity. At T2, the higher proportions of Command Sequences occur during a PT State indicating less attendance to the relational demands of play at T2. The assertion that the increase in no opportunity could be a task effect is supported by the increased complexity of the puzzle at T2 complex (completing a map of the United States where the child had to identify the state and where it is positioned within geography of the U.S.) and the decreased attendance to the relational demands of play. That is, the increased task difficulty coupled with the father's indirect engagement through surveilling and monitoring rather than collaboration, created the conditions for an increase in no opportunity.

With regard to D4, no opportunity increased from .14 at T1 to .54 at T2. The increase in no opportunity in this dyad suggests a developmental and task effect. As discussed in Study 2, this child is developmentally younger than any other child in this study as seen in his expressive and receptive language skills, physical size, and motor coordination. During Time 2, this dyad is engaged in a task that requires the child to identify plastic play figures at the request of the father. There are moments where the child is requested to pronounce the names correctly as well. The high proportion of no opportunity suggests that the degree of difficulty embedded in this task was perhaps beyond the child's developmental level. Additionally, the increase in no opportunity indicates that perhaps the father did not giving his sons ample time to fulfill a request, or the son was unable to fulfill their fathers' requests in the prescribed time.

CHAPTER SIX

DISCUSSION

This dissertation reported three studies on father-son play interactions. These studies explored the features of communication practices that create, sustain, and promote mutuality in decision-making processes and engagement in a task-defined activity, namely play. Study 1 was an exploratory microanalysis of decision making during the play interaction of a single father-son dyad. Study 1 developed a conceptual framework and coding system for mutuality. Study 2 extended the research from Study 1, and through applying the coding system developed in Study 1, reported on individual differences time in the extent and quality of mutuality during two videotaped sessions for each of four dyads. Study 3 extended the research from Study 2 and compared two coding systems for assessing parent-child interaction.

This section discusses the findings of each of these three studies, first considering mutuality during father-son play and its implications for well-being and individual development. Next, why African-American males were chosen is discussed followed by a discussion of the extent and quality of mutuality across each of the father-son dyads examined in this research. Finally, the value of microanalytic techniques in the study of parent-child communication, limitations and directions for future research are considered.

Mutuality, Well-Being, and Development

Mutuality is considered key to well-functioning child-parent relationships (Kochanska, 1997; Maccoby, 1992) and more generally, considered key to enduring and well-functioning relationships we create with others across our lifespan. Individuals could be understood as psychological, cognitive, emotional, and social beings whose well-being is exhibited through communicative practices. That is, healthy and well-functioning psychological, emotional, and social selves are reflected in day-to-day communication and social interaction across our lifespan. Being mutual with others as expressed through communicative practices is one way we exhibit well-being across cognitive, psychological, emotional, and social domains of day-to-day life.

Considering mutuality as a communicative and social process negotiated in the ongoing stream of behavior provides insight into the ways in which we exhibit mutuality with others in every day interaction. That is, prioritizing communicative practices and social processes informs an understanding of mutuality across day-to-day life. Thus, attendance to communicative and social processes awards privilege to the individual as a social being who exists in relationship to others and is best understood in relationa to others. That is, this perspective considers human existence as relational rather than only psychological (Minuchin, 1974, 1978; Mokros, 1996, 2003; Sullivan, 1953).

Mutuality, Well-Being, and Individual Development Evinced Through Decision Making

Mutuality during moments of engagement with others is evinced through where we allocate our attention, either on the practical or the relational demands of an activity, coherence of an activity, and how localized space is created and used. Mutuality is also linked to well-being as a quality of every day and individual development.

Study 1 examined decision making as one way in which we are mutual with an other during an ordinary activity. Decisions, as examined in Study 1, are sometimes made within the context of relationships with others, and during moments of decision making there is an attendance to the practical and the relational demands of an activity. The attendance to the practical and relational demands of spending time together within the context of a decision-making space has consequence for not only understanding how relationships are produced and maintained, but also for individual development and well-being across cognitive, psychological, emotional, and social domains of life.

We orient ourselves to practical and relational demands of an activity, and more generally spending time together, through communication. That is, through expressions of "what to do" (e.g., goal identification, goal specificity, procedural logic, planning, etc.), we show how we are orienting ourselves to the practical demands of an activity. Through expressions of "how to do it" (e.g., participation, collaboration, cooperation), we show how we are orienting to the relational demands of an activity. To put another way, we show how we are orienting to an activity and an other through communication.

Individuals develop across cognitive, psychological, emotional, and social domains. Decision making, as shown in Study 1, provides a context for studying psychological, cognitive, emotional, and social development. Evidence of well-being across these developmental domains is evinced through communication and interaction processes. For example, psychological well-being is evinced through expressions of ego suppression by collaborating and cooperating with an other during interaction. For example, through expressions of participation, collaboration, and cooperation one recognizes him/herself as a social being who exists in relation to others. Participation, collaboration, and cooperation mark an interaction as mutual and are important because they express an ability to balance egocentric demands with demands of an other in interaction. That is, participation, collaboration, and cooperation are important because they are not only markers of meaningful engagement but also social markers of one's ability to meaningful engage with an other during interaction.

Cognitive well-being is evinced through our orientation to tasks. In the case of father-son play, cognitive well-being is evinced through expressions of goal elaboration and specificity, planning and procedural logic, use of available resources, and design features. The father and son are able to work collaboratively to identify a goal, expand the goal, and implement the necessary decisions along the way to achieve the goal. The son, who is approximately two - three years of age, is able to make logical leaps through verbal expressions by giving voice to his desire to add a sidewalk to the grounds of Tallville and add people with purposeful and goal-directed activities, namely walking, and running, jumping across the bridge added to Tallville's grounds or looking for fish in the water he imagines on the grounds of Tallville.

Psychological and cognitive well-being are also visible in producing a coherent activity. That is, coherence within interaction is born from sequences of verbal and non verbal actions treated as coherent and orderly by participants directed toward a common focus or task and through how we orient toward one another in a localized space. The first action the father and son took to realize a coherent activity was to create a common space where each had equal access. They did this by organizing themselves around a small, square table and by making the space and the building materials equally available to each. This establishes a common space wherein they can negotiate the activity and focus their attention. Through questions and relevant responses they identified a singular goal from the outset thereby removing ambiguity from the play session.

Emotional well-being is evinced by the father and son attending to the task and a shared, common focus, and an ability to self-regulate their respective emotional states. For example, during moments of goal elaboration and goal specificity, namely deciding how tall is tall enough for Tallville, there was opportunity for the child to lose his temper when the father challenged the son's decision of how tall is tall enough. However, instead of losing his temper, the child was able to self-regulate his emotional state and continue on with the activity without interruption.

Finally, mutuality links to well-being as a quality of day-to-day life and individual development as evinced in our ability to meaningfully engage and attend to self, other, or tasks in moments of engagement. Expressions of mutuality during the course of social interaction suggest well-being because one's ability to sustain a common focus, manage attention and states of arousal, regulate affect, and participate and construct coherent day-to-day interactions reflects an individual's competency in and meaningful attendance to the demands of social interaction. Mutuality links to well-being as a quality of day-to-day life and individual development through manifestations of relational competency as we meaningfully engage and attend to self, others, or a task in moments of interactional engagement. To sustain and pursue a common focus suggests an individual's ability to manage his attention and states of arousal. In order to get things done in daily life, we need to be able to cooperate and collaborate with others and sometimes suppress egocentrism.

Mutuality links to individual development because as children develop they should be able to demonstrate competencies in self-regulating attention and states of arousal. The child in Study 1 demonstrates an ability to self-regulate his attention and arousal state, indicating some degree of developmental well-being.

The ability to attend to the activities of others suggests well-being within the social domain. That is, if one is able to meaningfully attend to an other's thoughts and actions, he or she is able to manage his or her attention and appropriately match his behavior to the situation. Managing our attention also guides social interaction and influences how we interact with others, and it creates the conditions for empathic displays, a hallmark of psychological, cognitive, emotional, and social well-being. Of interest, then, is how empathy is a communicative process emerging from moments of mutual engagement. As Study 1 shows, the child demonstrates a remarkable ability to be empathic at a very young developmental age.

Empathy as Communication

Results from Study 1 research support the above assertion that empathy is a social process linked to moments of mutual engagement. The father and son in Study 1 experience empathic moments born from mutual engagement with each other and the task at hand. In the context of Study 1, mutuality during play created the conditions for empathic displays to emerge. For example, empathic displays include the father recognizing that not including Batman might hurt his son's feelings or cause the task of making Tallville to be derailed; the son' recognition that the imaginative inhabitants of Tallville would be looking for fish to eat it; and the son asking his father if he likes fish. Mutuality experienced as an attendance to task and other created the conditions in which a father and son could engage in empathic displays and subsequently develop their relationship.

Much of the research on empathy has considered empathy as an outcome rather than an interactional phenomenon emerging from communicative processes. Historically, empathy has most commonly been discussed under the rubric of prosocial behaviors and conceptualized within a dialectical framework of cognition and affect (e.g.; Deutsch & Madle, 1975; Eisenberg & Fabes, 1990; Eisenberg & Miller, 1987; Feshbach, 1978) and in doing so, has awarded privileged status to individuals as chiefly psychological beings with a secondary emphasis of individuals as relational and social beings. The evolutionary trajectory of empathy has consistently positioned the individual as a psychological being (e.g., Lipps1905; Titchener, 1909; Piaget & Inhelder, 1963) and neglected explicitly positioning the individual as a social and relational being.

Absent from these discussions on empathy is consideration of empathy as an interactional phenomena. Discussions of empathy, particularly within discussions supporting a cognitive component to empathy, do not explicitly acknowledge that empathic displays are actually linked to communication processes. Simply stated, empathy occurs when one is able to essentially claim to know another's state where state is equated with internal world. The only way to know another internal world or mental world is through communication. As Pittenger, Hockett, and Danehy (1960) argue in their seminal work, *The First Five Minutes*, the only way to know another's mind is through observing his or her communication behavior or practices. This view suggests that empathy is a communicative process rather than merely only an outcome.

The child in Study 1 demonstrates a remarkable developmental milestone when he asks his father if he likes fish. This simple question shows that the child demonstrates an awareness of his father as a separate person with his own likes and dislikes.
During a play activity where the father and son negotiated practical and relational decisions related to play, the child makes a decision separate from the task of making Tallville to get to know his father as a person with his own likes and dislikes. What we see, then, is that through a father and his son sustaining a common and shared focus for an extended stretch of time, and managing the practical and relational demands of spending time together, we glean an insight into how relationships in the early stages of life are formed, how relationships are experienced, and individual differences in how these relationships are developed.

African-American Males

This research focused on African-American fathers and their sons because they are not well represented outside of studies that focus on the negative aspects of life, such as poverty and its implications for mental and physical health, absenteeism among African-American fathers, and generally African-American males as an at-risk population. The parents and children in this study are living at or below the poverty line and are consequently, by definition, at risk. Instead of looking at African-American males through a stereotypical lens of absentee and uninvolved parents and an at-risk population, this research focused on the moment-to-moment situatedness of everyday interaction within four African-American families. This study is unique and of interest because it examined the moment-to-moment child-rearing practices in families at risk and spoke to how through communicative practices, fathers and sons are able to construct and sustain moments of mutual focus on a task or each other and what this says about not only how relationships in the early stages of life are developed but also about well-being as a quality of everyday life among a population deemed at risk.

Time in Mutuality during Father-Son Play

Fathers and sons were shown to exhibit differences in the way they spent time together. Most generally, dyads differed significantly in the amount of time spent in mutuality, with a single dyad, D4, being distinct. It is worth noting, however, that all dyads did spend more time in mutuality than away from mutuality.

Dyad 4 is distinct from other dyads in that the child in this dyad appears to be developmentally younger than all other children in this study. Expressive and receptive language skills, motor coordination, emotional regulation, and physical size do not appear to be as robust as other children in this study. For example, the child in D4 is not as verbal as the other children in this research, and there are moments where he appears unable to understand his father’s spoken words. Additionally, his physical coordination, (e.g., falling while walking or running and maintaining balance) may indicate his younger developmental age. His physical size suggests he may be developmentally younger and his emotional regulation also suggests a younger developmental age. For example, there are two occurrences of the child in D4 dropping to the ground in the midst of an activity because he no longer wishes to continue or is feeling fatigued. Consequently, one’s ability to create an sustain mutual encounters may be linked to issues of individual developed as mentioned above.

Quality of Mutuality

Fathers and sons were shown to exhibit differences in the quality of mutuality they exhibited over time. For example, dyads showed a tendency to exhibit greater a greater proportion of mutuality in practical demands of play. Across this group of four dyads, this suggests that as the children developed, they were less inclined to allocate time on the relational demands of play. This could be understood as an emergent aspect of children's differentiation from others, as the development of autonomy and less enmeshment with their parents.

Command Sequences and Mutuality

The examination of how Command Sequences distributed across Interaction State revealed that there is a range of authoritarian and permissive parenting across dyads. That is, there was variation across dyads with regard to how parenting was enacted. Three dyads were comparable across frequency of commands over time. One dyad, D4, is distinct and represents an extreme range of parenting practices. Over time the range in frequency of Command Sequences was considerable within this dyad. D4 went from being the most permissive to the most authoritarian dyad across all dyads. Interestingly, all dyads were more compliant than not and over time the frequency of no opportunity increased due to a single dyad, D4.

The data for time and quality of mutuality exhibited between a father and his son seem to suggest a development effect with regard to mutuality. That is, children who are developmentally younger may be less able to exhibit mutuality than developmentally older children.

Examining how DPICS Command Sequences distribute across Interaction States provides a profile of how and where parents in this study were most demanding. That is, this study shows through the distribution of Command Sequences where parents made the most requests with regard to Activity and Focus. What we see is that the majority of Command Sequences occur during Play States, which would seem to suggest that in general, all parents were somewhat authoritative in their approach to spending time with their children in play. That is, based on the distribution of Command Sequences alone, one could surmise that all parents were making requests of their children with regard to play. The reason for this is unclear, but perhaps this was done to provide structure and organization to spending time together rather than allowing for a more free-flowing and less structured interaction.

When Focus was examined, namely Task and Relational, we see that the majority of Command Sequences vary over time with most commands occurring during Relational States at T1 and the majority of commands occurring during Task States at T2. The increase in Command Sequences in Task States could suggest that as children develop, parents are trying to encourage more structure and organization to their activities while the decrease in Command Sequences in Relational States at T2 may suggest that as children develop they are better able to self-regulate participation, collaboration, and cooperation during moments of engagement. That is, children are beginning to differentiate themselves from their parents and exert more autonomy and agency with regard to how they approach interaction, perhaps self-regulating choices of when or when not to participate, collaboration, and cooperate with their parents.

Parent-Child Communication

This dissertation has examined the moment-to-moment practices of fathers and son spending time together. Through the techniques of microanalysis (Mokros, 2003), namely transcribing and mapping the natural history of father-son interaction, insight into decision making and mutuality in parent-child interaction has been presented. Though interpretive microanalysis is a time consuming process, its central strength is its ability to flesh out what really happens when two people interact and offer insight into the organization and flow of everyday activities. Additionally, the microanalytic techniques used in this dissertation research make possible communication explanations for well-being, individual development, and relational development. That is, by systematically transcribing and mapping father-son interaction, this research offers an explanation for understanding social, psychological, and neurological processes through communicative processes. Though time consuming, microanalytic techniques as applied in this dissertation research allow for insights into the communication and interaction practices that give rise to individual development, relationship development, and well-being as a quality of everyday life that may not be otherwise uncovered through alternative methodologies.

As mentioned throughout this dissertation, the ability to self-regulate states of arousal, to manage attention, to sustain a common focus, to meaningful disambiguate between self and other, and to implement decisions are all markers of well-being. It is through communication, verbal and non verbal expressions that are treated as orderly and coherent, that behavior that presumably is mapped to cognitive, psychological, emotional, and social well-being is understood. This research, by studying communication and interaction directly, contributes to our understanding of individuals as social beings who, through communication and interaction processes, demonstrate well-being and create and maintain relationships.

Limitations of the Study

This research examined mutuality across and within four African-American father-son dyads at two points in time, fifteen months apart. Limitations of this research are its small sample size, only nine play interactions, and the race and gender restrictions. The small sample size and restricted population may not allow for generalizability regarding how individuals exhibit mutuality in interaction.

Issues relating to methodological approach are important considerations. The methodological approach used in this research relied on videotaped interactions of fathers and sons. The presence of the experimenter recording the interactions and the subsequent instructions could have impacted how each of the play sessions unfolded thus calling into question whether or not these data are naturally occurring. In some instances, the experimenter was either part of the interaction or a momentary disruptive presence. That is, there were moments where the experimenter either involuntarily injected herself into the scene through sneezing, coughing, or laughing at what the father and son were doing and at other times the father and the son each addressed either the camera or the experimenter. These are unavoidable when collecting data of this type. Additionally, the transcription and mapping of the father-son interactions represents *a* natural history rather than *the* natural history of what occurred (Mokros, 2003). When transcribing, issues of reliability are important. This research did not address issues of reliability directly because it is by nature exploratory. However, a next step moving forward is to address reliability with the two coding systems used to study parent-child interaction.

This dissertation sought to examine the ways in which fathers and son were mutual with one another when asked to spend time together. Though this research offers some causal explanations, its main focus was not causality but rather remaining at the level of description to describe what happens when two people come together and generating interpretation from systematic review of transcripts mapping the natural history father-son interaction.

Directions for Future Research

This research provided a systematic approach for identifying units of decision making and interactional criteria for identifying mutuality during moment-to-moment parent-child interaction and compared two approaches for studying parent-child interaction. With regard to the DPICS coding system, the focus of this research was directed at the distribution of Command Sequences across States. One direction for future research should consider how the DPICS events not considered in this dissertation distribute across Mutual States to glean a further understanding of the ways in which parents and children are mutual with one another.

This research presupposes play between a parent and child. As shown, the four dyads in this study each exhibited more Play States than Non Play States but this may not be the case across other dyads. Future research should consider how other parent-child dyads exhibit a profile of Play States and Non Play States. Another avenue for future research is examining each of the other two videotaped play sessions for each of the four dyads in this study. Because this research argues for mutuality as a link to develop, looking at each of the four time points at which these dyads were videotaped may provide more insight into individual development and the ways in which we are mutual with one another. Additionally, further consideration should be given to refining and developing a more systematic approach for how spatial orientation changes through time and how space is used during moments of task and relational focus.

Finally, Chapter 1 of this dissertation asserted that mutuality is important for mental health. This research could potentially have application in diagnosing Autism Spectrum Disorders. Autism Spectrum Disorders are defined by impairments in social interaction, the lack of appropriate responsiveness, and marked restricted interests and attention allocation (Rapport & Ismond, 1996). The coding system for mutuality can be further developed and refined and perhaps used to assess potentially problematic behaviors in early childhood.

Conclusion

This research offered a systematic approach for studying mutuality within interaction. This study contributes to communication theory and research because it examines the moment-to-moment child-rearing practices in families at risk and spoke to how through communicative practices, fathers and sons are able to construct and sustain moments of mutual focus on a task or each other and what this says about not only how relationships in the early stages of life are developed but also about well-being as a quality of everyday life and individual development.

It showed that mutuality is not a static state, but rather a communicative and social process with identifiable features. This research shows that moments of mutual engagement with others lead to empathic moments where intimacy is cultivated and relationships developed. The ability to experience mutuality with another person is a sign of psychological well-being in that one is able to suppress egocentrism and cooperate and collaborate in order to get things done. An ability to meaningfully engage and sustain focus on an other or a task has implications for mental health and mental illness and our psychological and social selves. Healthy and well-functioning psychological and social selves are reflected in communication and social interaction throughout life.

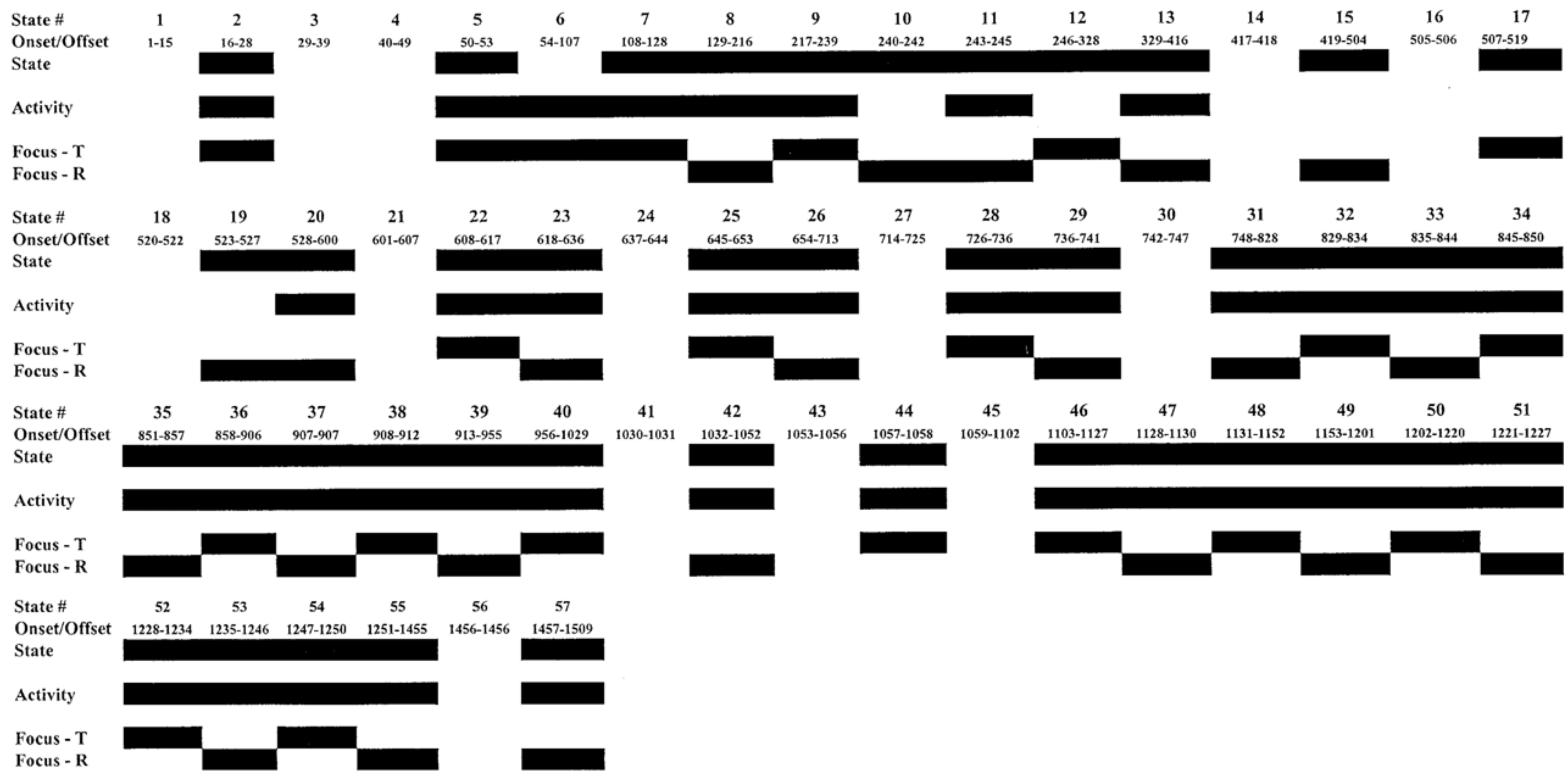
Sustaining and pursuing a common focus without being derailed by internal or external stimuli during moments of interactional engagement with others or activities reflects an ability to manage attention and states of arousal. Although this study doesn’t look at attention and arousal on a cognitive level, it does map the behavior that presumably correlates with differences in attention and arousal and subsequently has implications for understanding social, psychological, and neurological processes as evinced through communicative processes.

Through microanalytic techniques, this study offers a way of understanding human development and relationships from a communicative perspective. And it offers a systematic approach for examining the moment-to-moment every day human existence and daily life from a non-clinical focus without the presumption of pathology within a population where pathology is presumed.

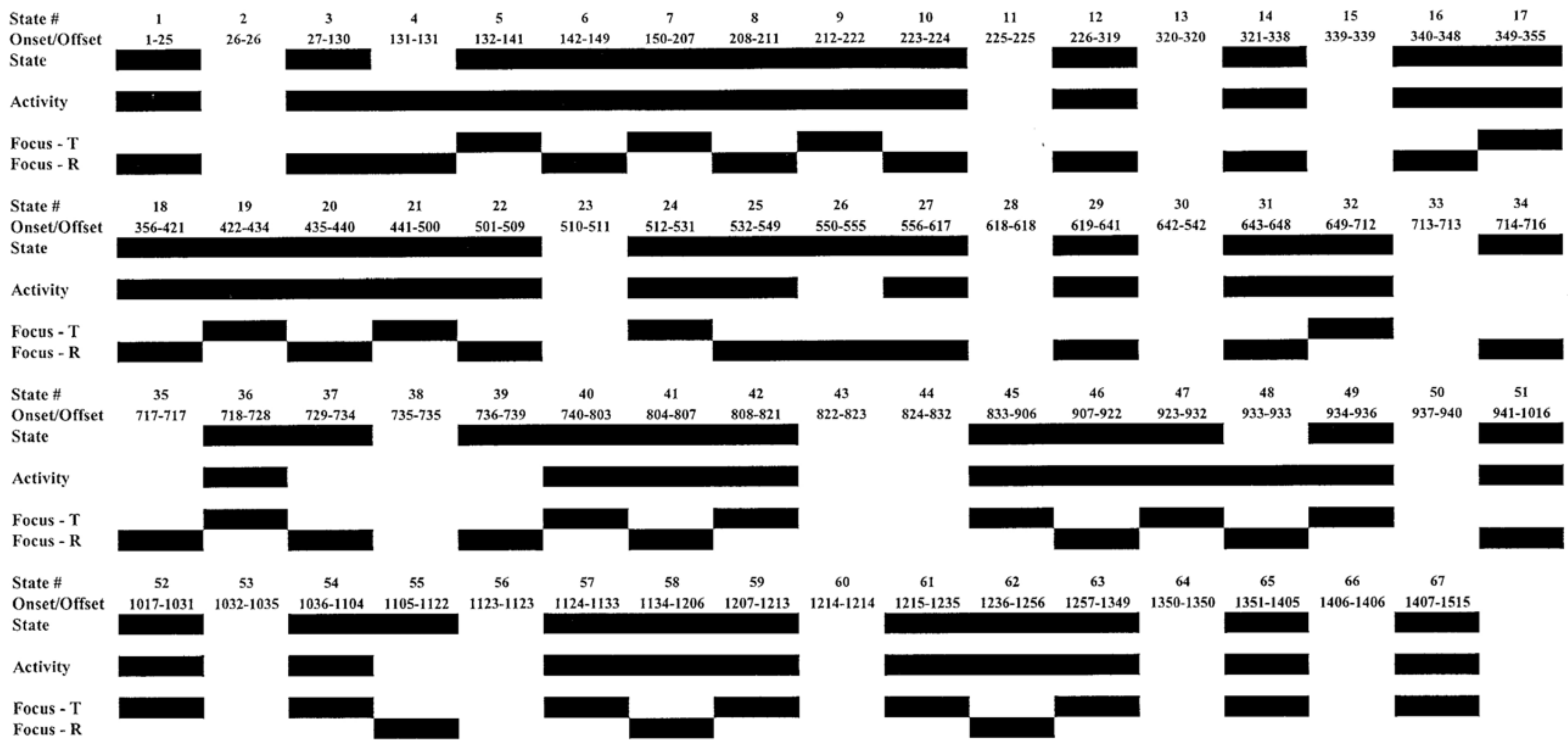
APPENDIX A: Interaction State Maps

Appendix A includes maps of Interaction States discussed in Chapter 2. Maps for Dyads 1 – 4 are shown at T1 and T2. These Interaction Maps show how each dyad moved through Mutual and Non-Mutual States.

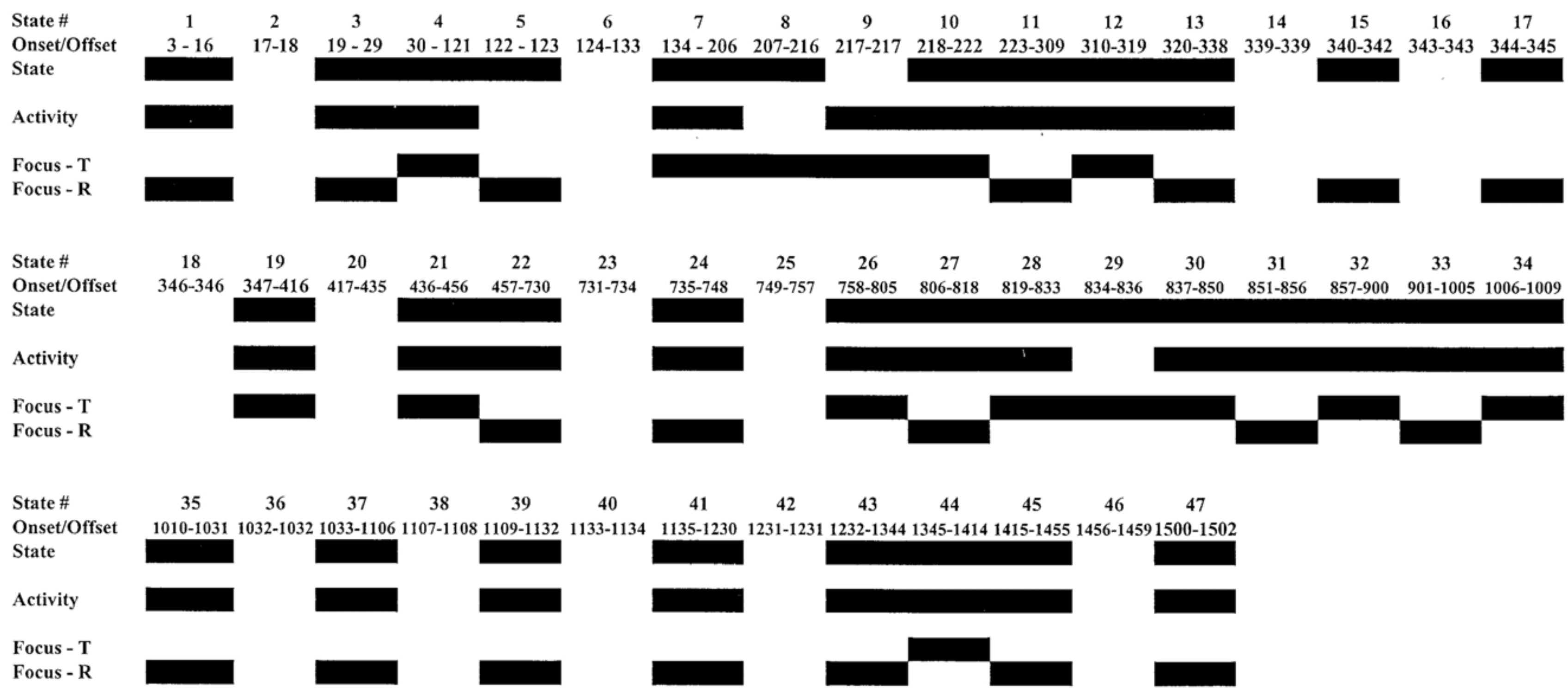
Interaction Map for Dyad 1 at Time 1



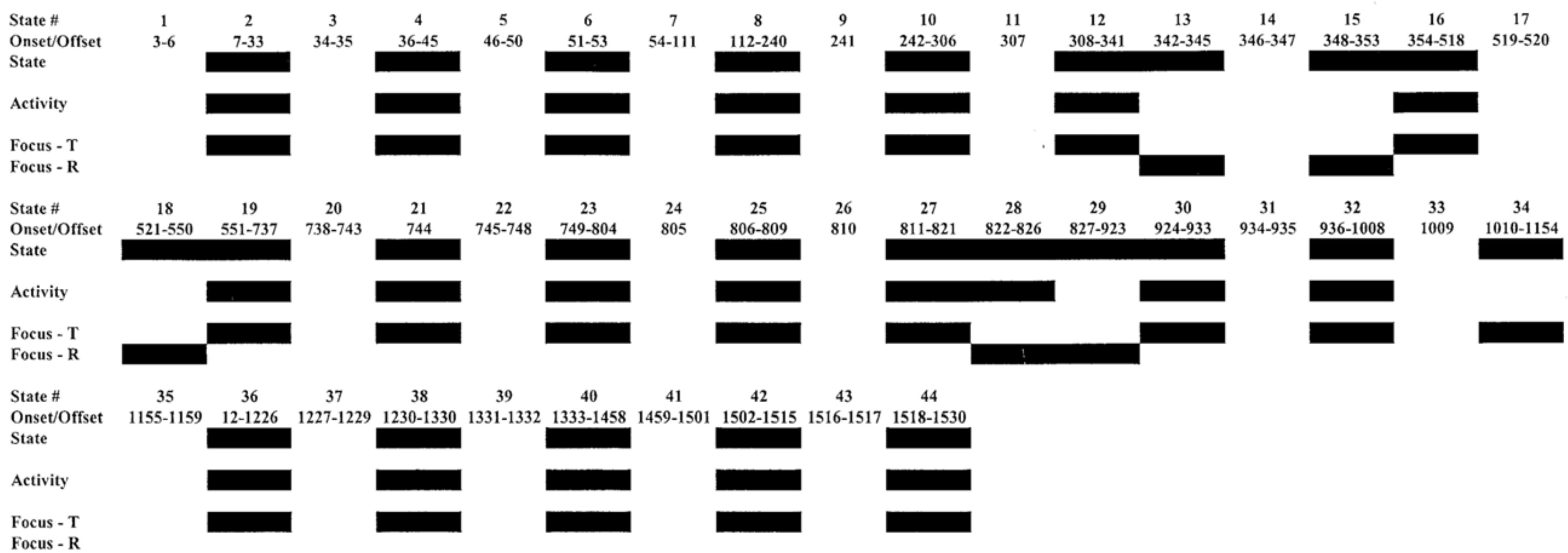
Interaction Map for Dyad 1 at Time 2



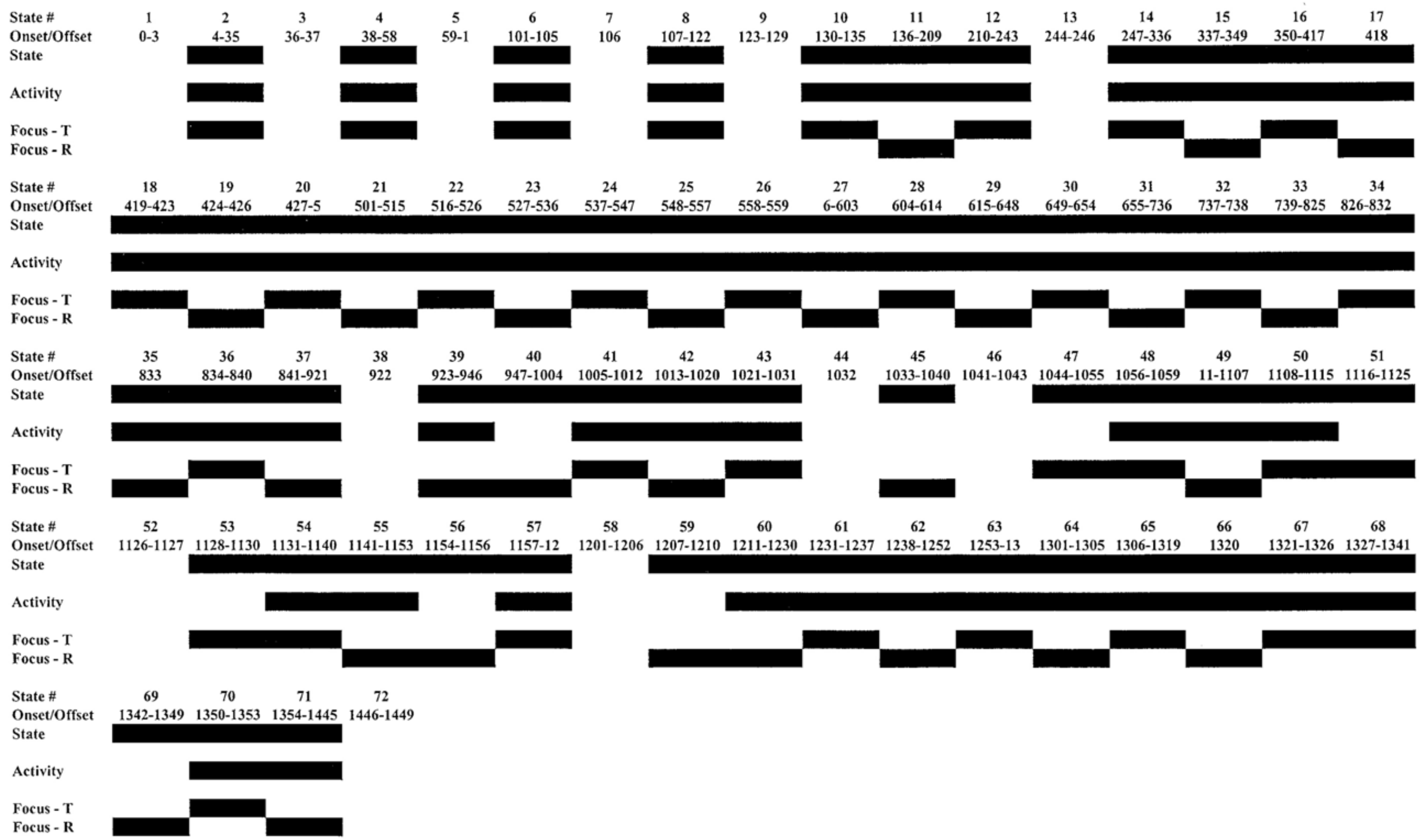
Interaction Map for Dyad 2 at Time 1



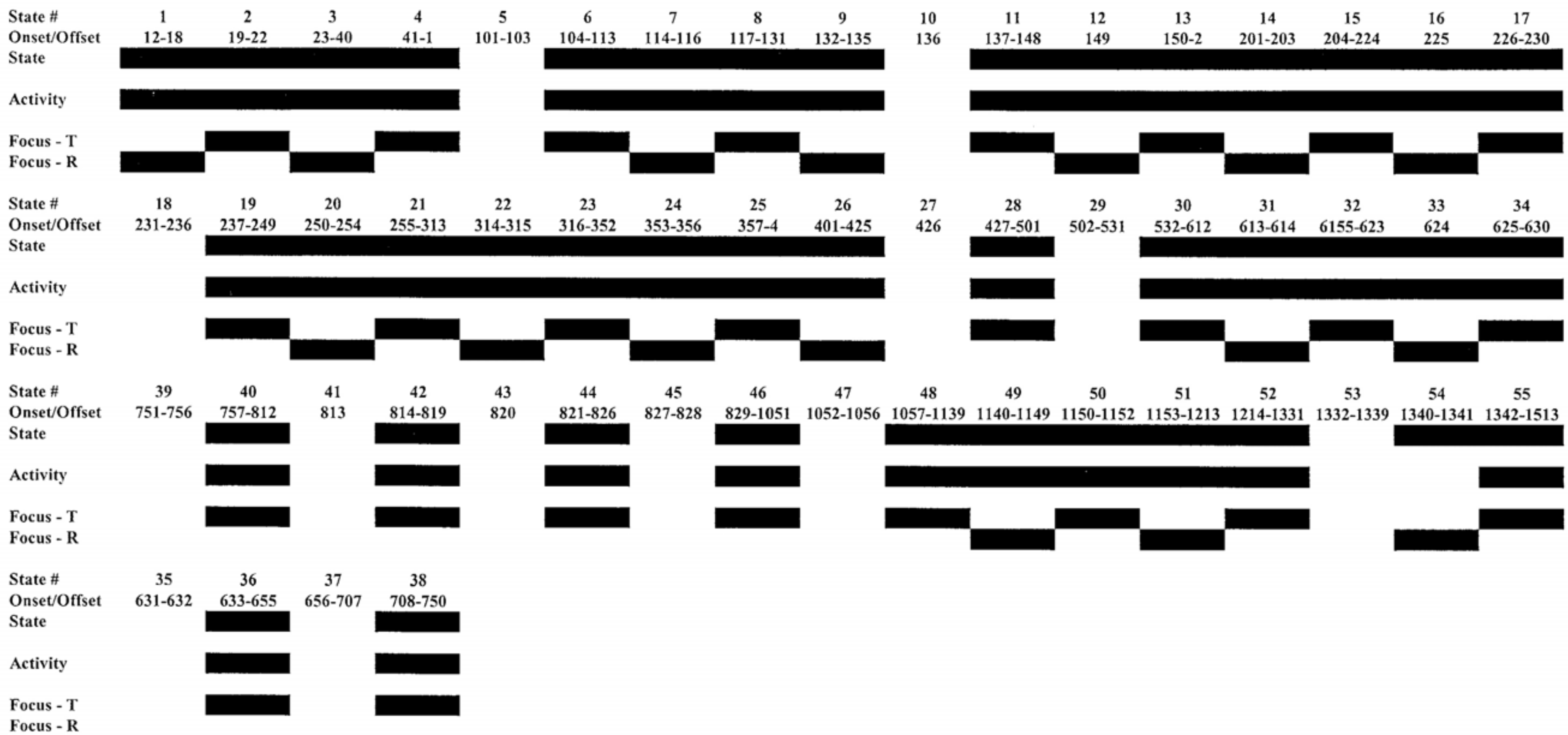
Interaction Map for Dyad 2 at Time 2



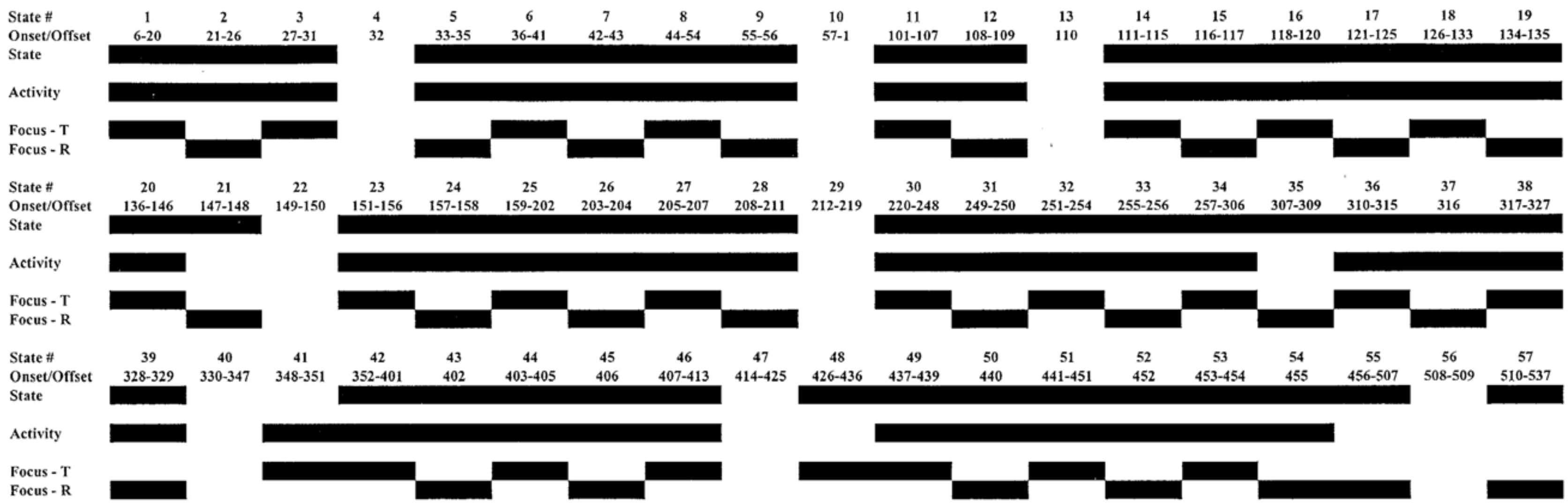
Interaction Map for Dyad 3 at Time 1



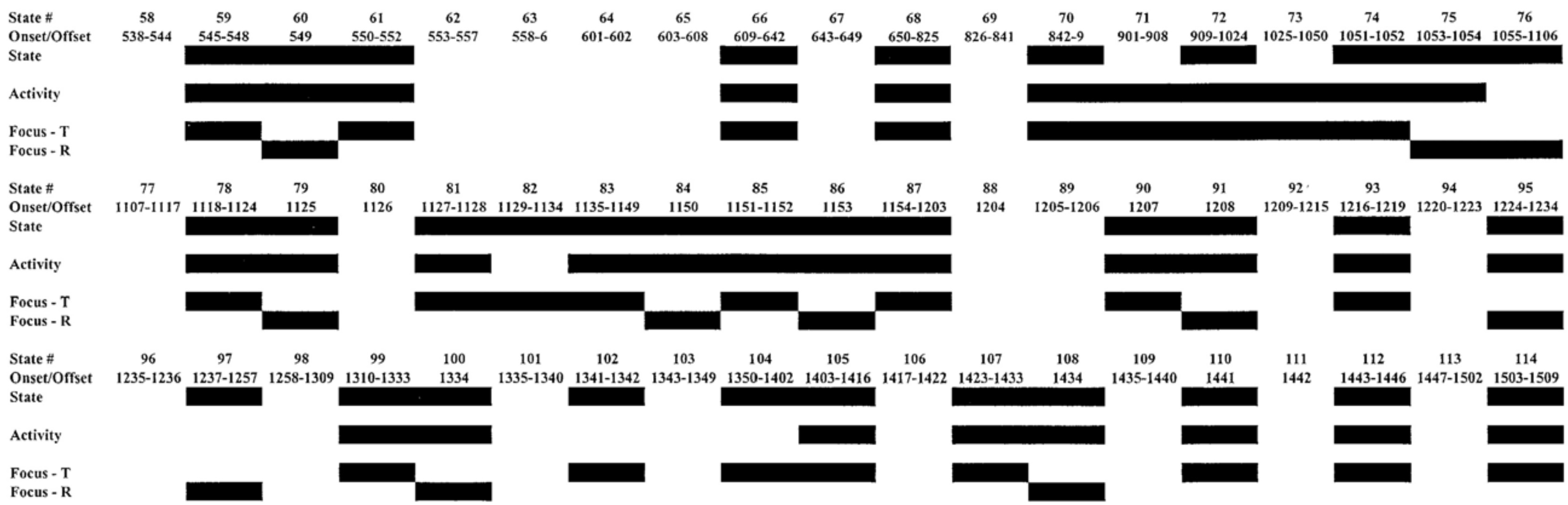
Interactin Map for Dyad 3 at Time 2



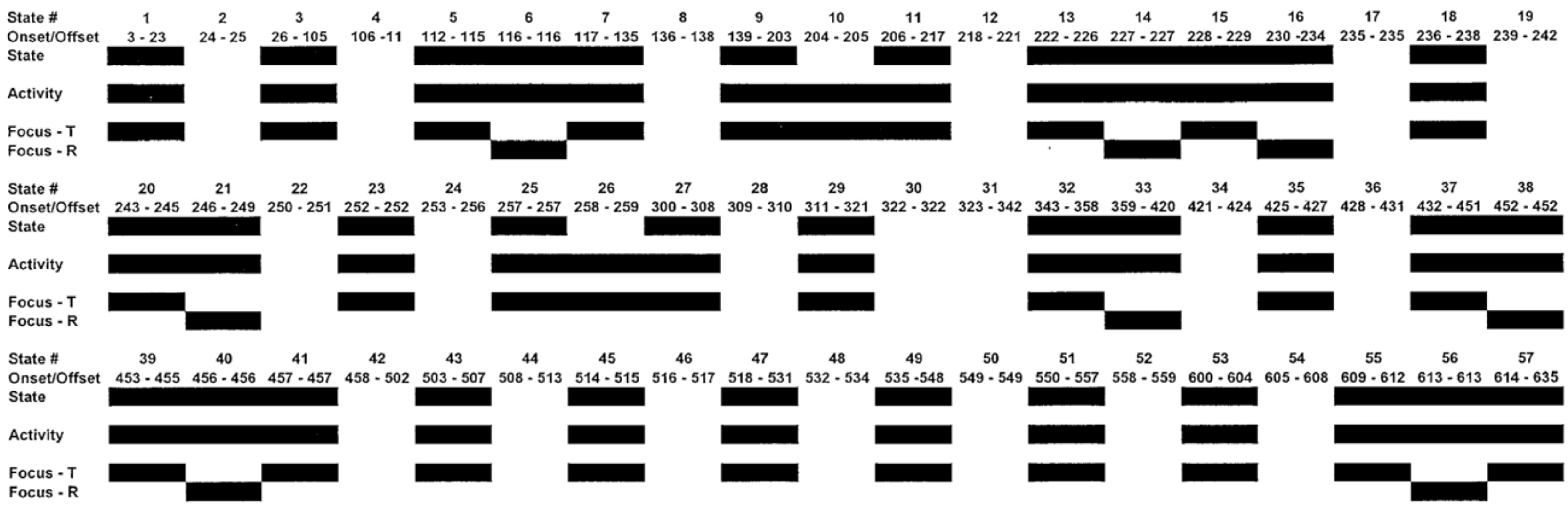
Interaction Map for Dyad 4 at Time 1



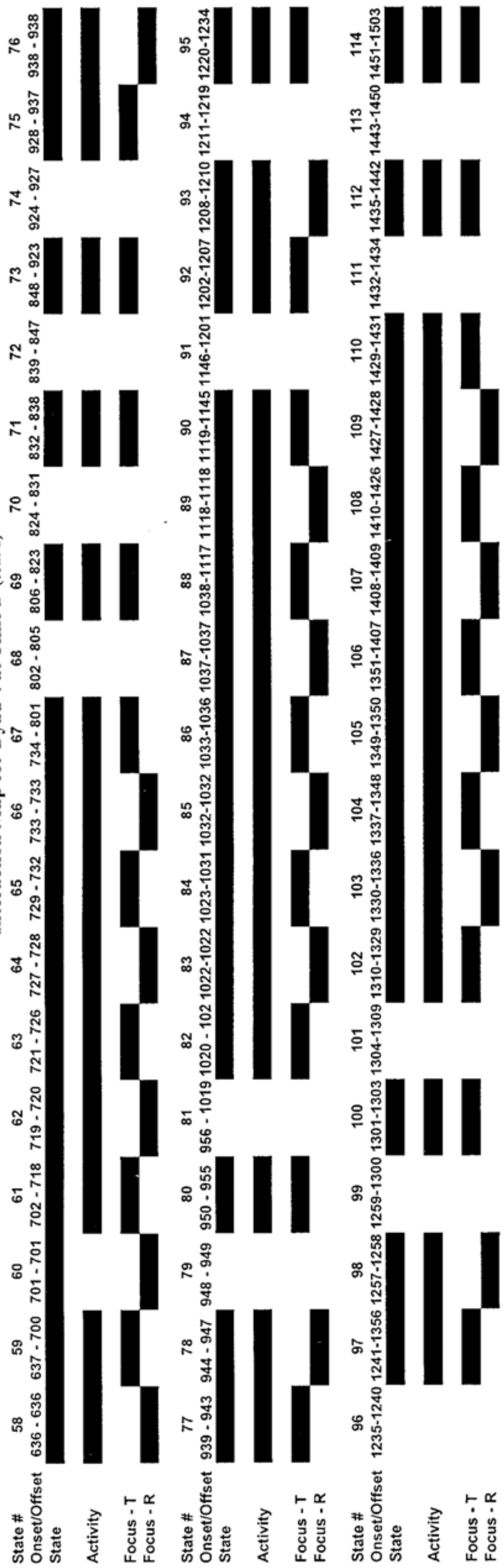
Interaction Map for Dyad 4 at Time 1 (cont'd)



Interaction Map for Dyad 4 at Time 2



Interaction Map for Dyad 4 at Time 2 (cont'd)



APPENDIX B: DPICS Definitions

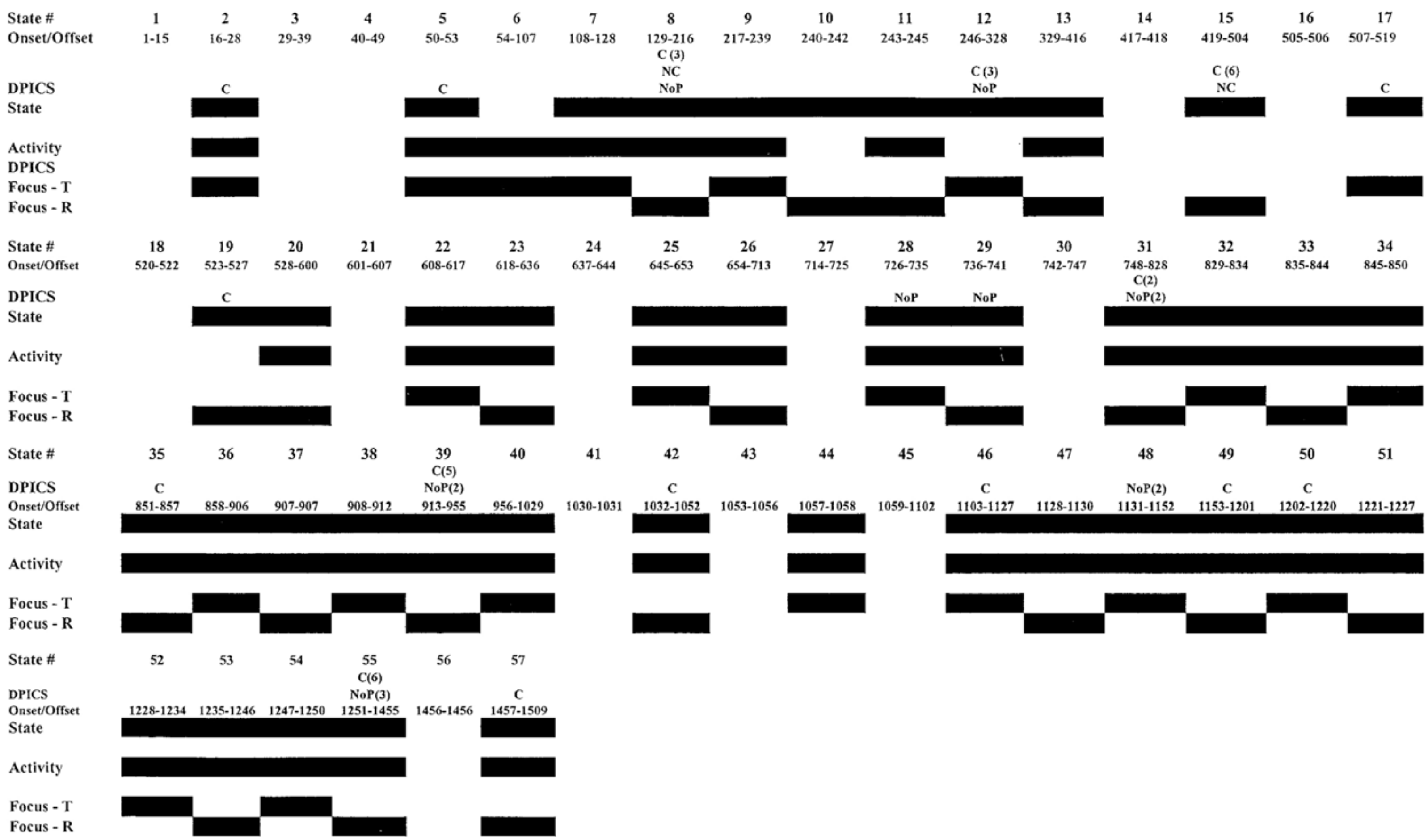
Definitions of DPICS Command Sequences

DPICS Event	Definition
Command	A direct command is a clearly stated order, demand or direction in declarative form. The statement must be sufficiently specific as to indicate the behavior that is expected from the child.
Compliance	Compliance occurs when the child begins to obey, or attempts to obey a direct or indirect command.
Non-compliance	Non compliance occurs when the child does not obey a direct or indirect parental command even if the coder thinks the child may not have heard the command.
No opportunity	No opportunity occurs when the child is not given an adequate chance to comply with a command.

APPENDIX C: DPICS Command Sequences Linked to Interaction States

Appendix C shows the Interaction Maps for Dyads 1 – 4 at Time 1 and Time 2. These Interaction Maps show how DPICS Command Sequences Link to Interaction States identified in Study 2.

DPICS Command Sequences Linked to Interaction States: Dyad 1 Time 1

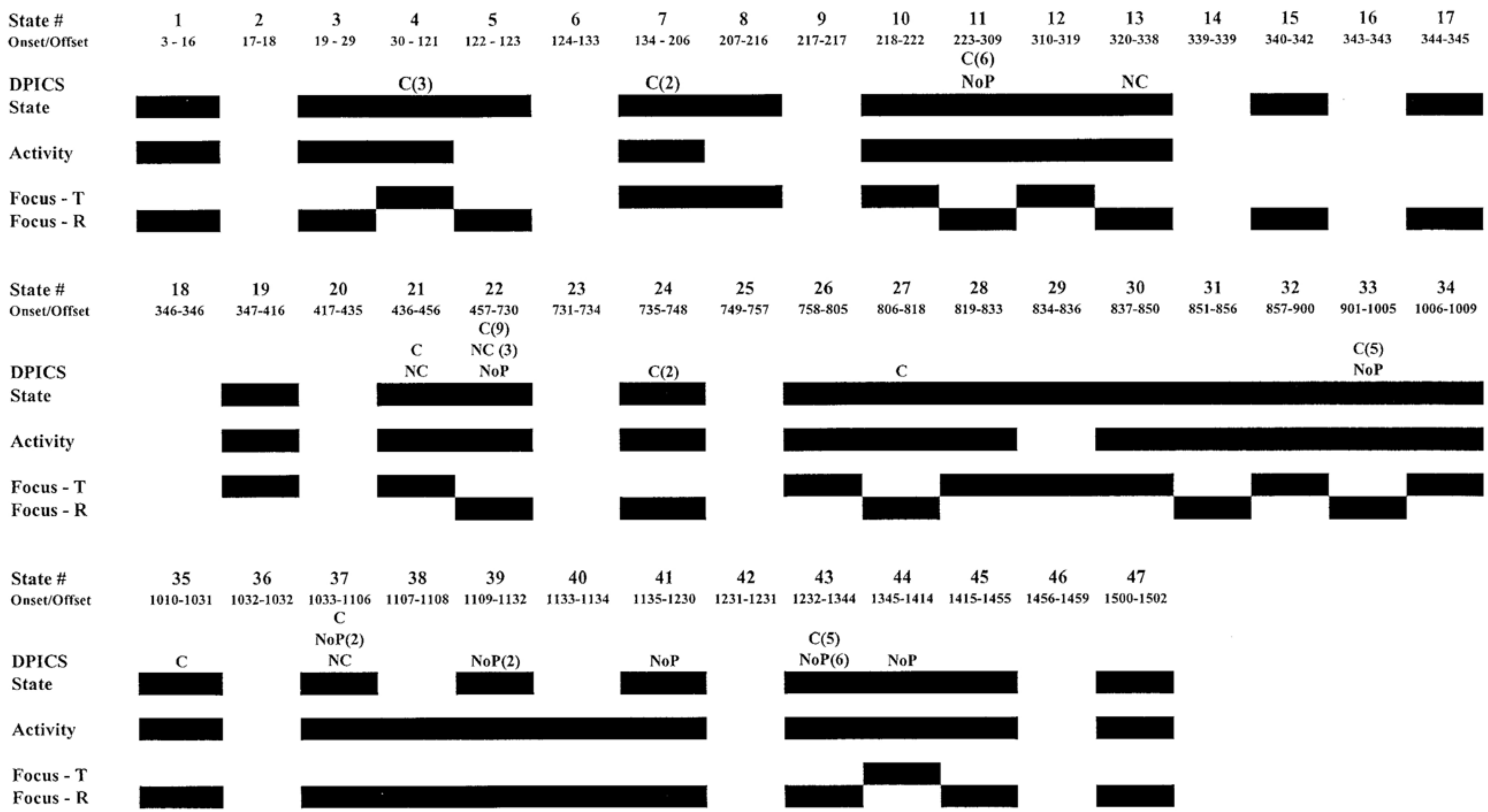


C = COMPLIANCE NC = NON CMPLIANCE NoP = NO OPPORTUNITY

DPICS Command Sequences Linked to Interaction States: Dyad 1 Time 2

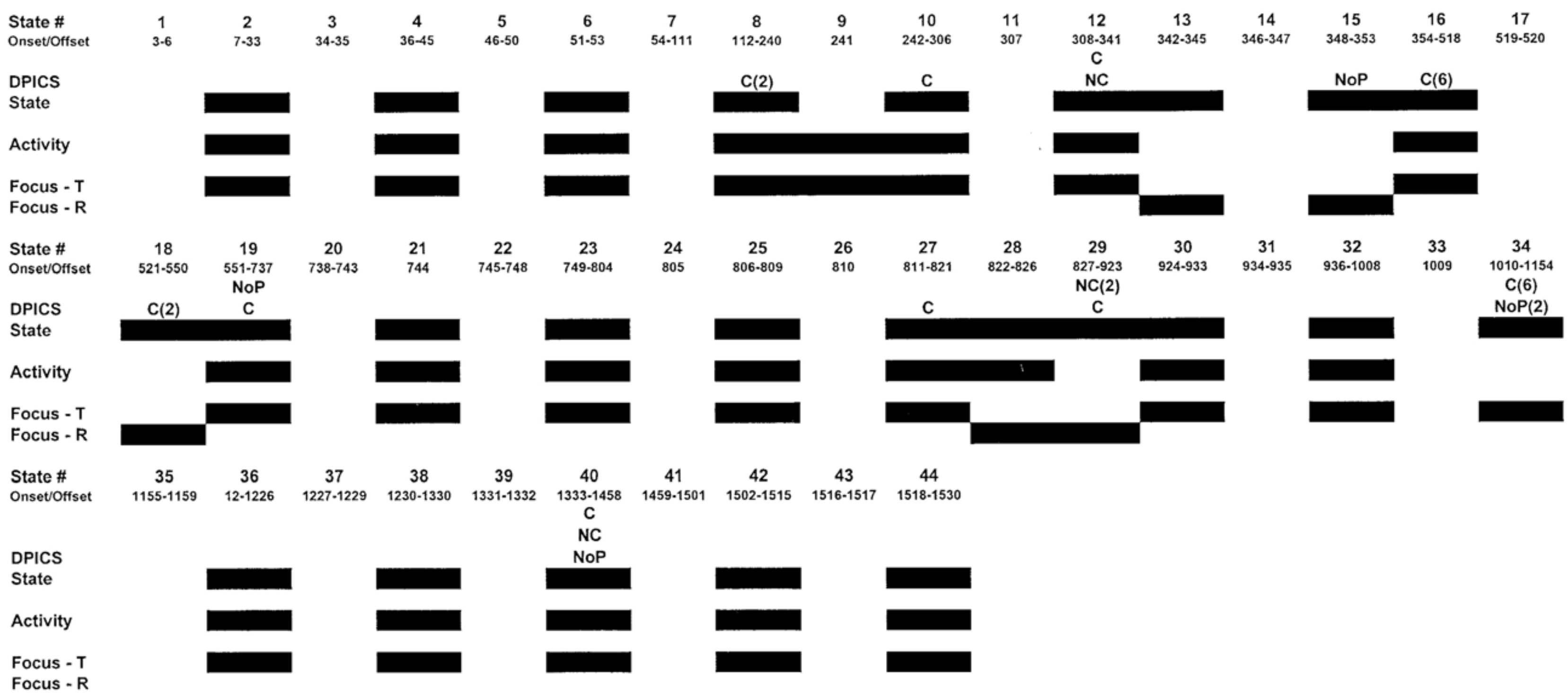
C = COMPLIANCE NC = NON CMPLIANCE NoP = NO OPPORTUNITY

DPICS Command Sequences Linked to Interaction States: Dyad 2 Time 1



C = COMPLIANCE NC = NON CMPLIANCE NoP = NO OPPORTUNITY

DPICS Command Sequences Linked to Interaction States: Dyad 2 Time 2

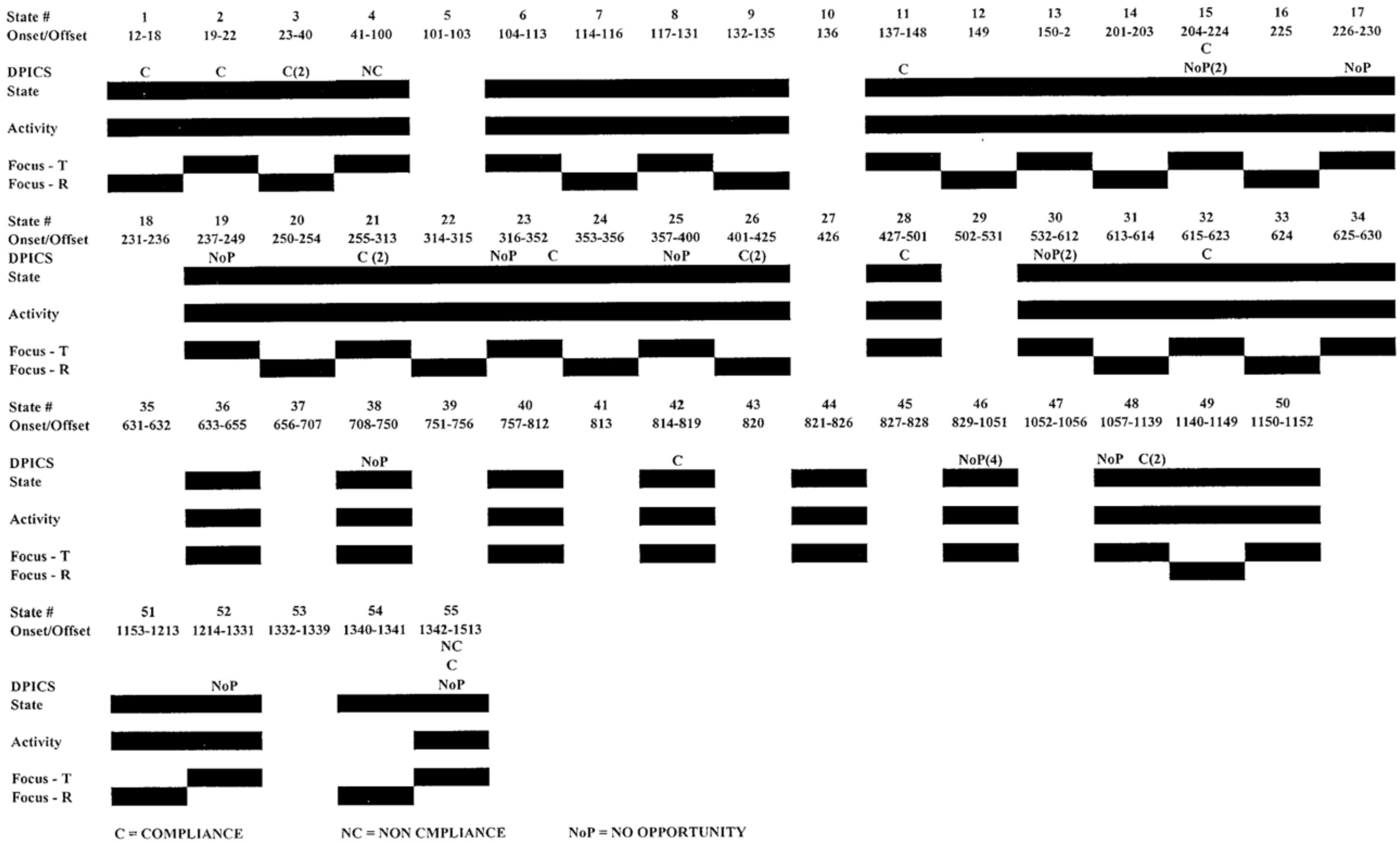


C = COMPLIANCE NC = NON CMPLIANCE NoP = NO OPPORTUNITY

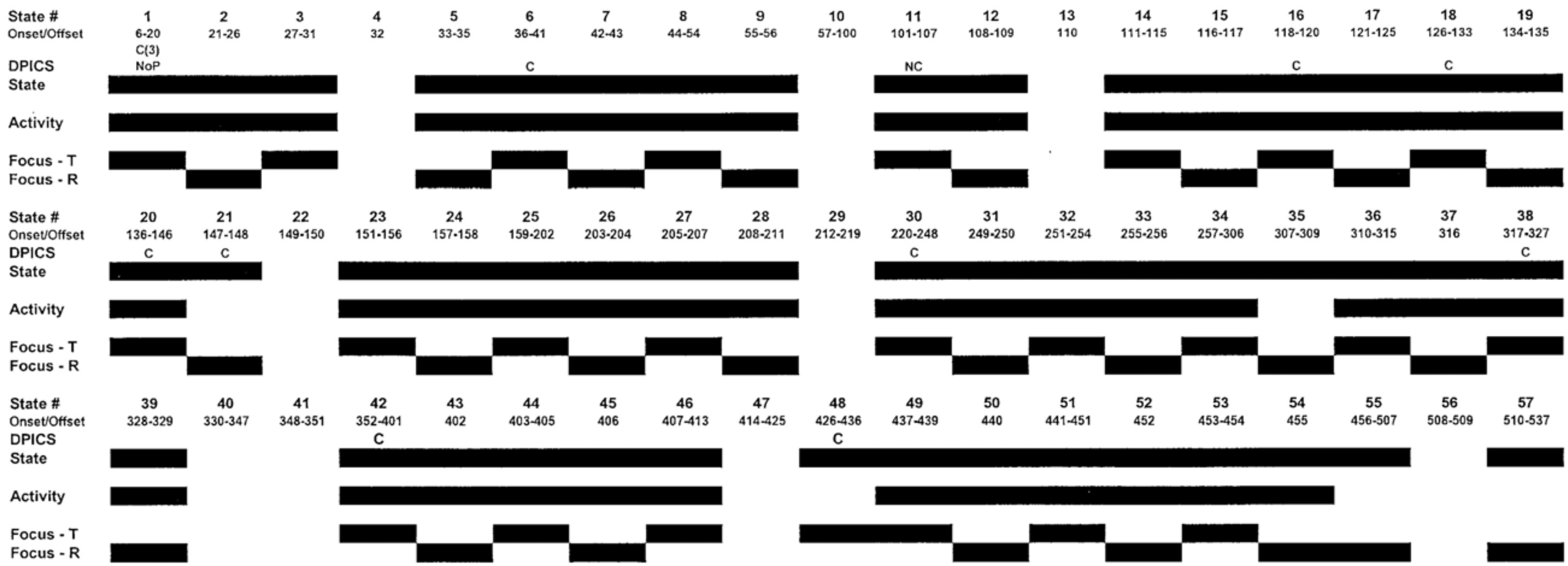
DPICS Command Sequences Linked to Interaction States: Dyad 3 Time 1

C = COMPLIANCE NC = NON CMPLIANCE NoP = NO OPPORTUNITY

DPICS Command Sequences Linked to Interaction States: Dyad 3 Time 2

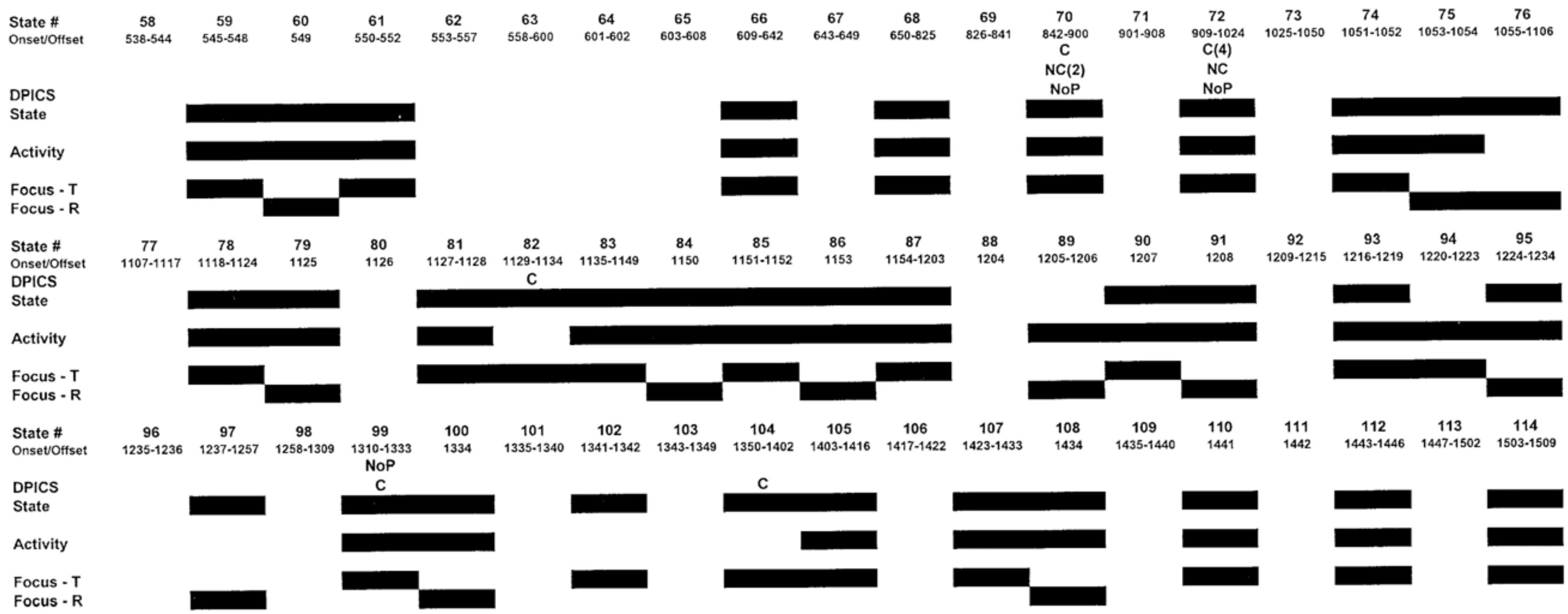


DPICS Command Sequences Linked to Interaction States: Dyad 4 Time 1



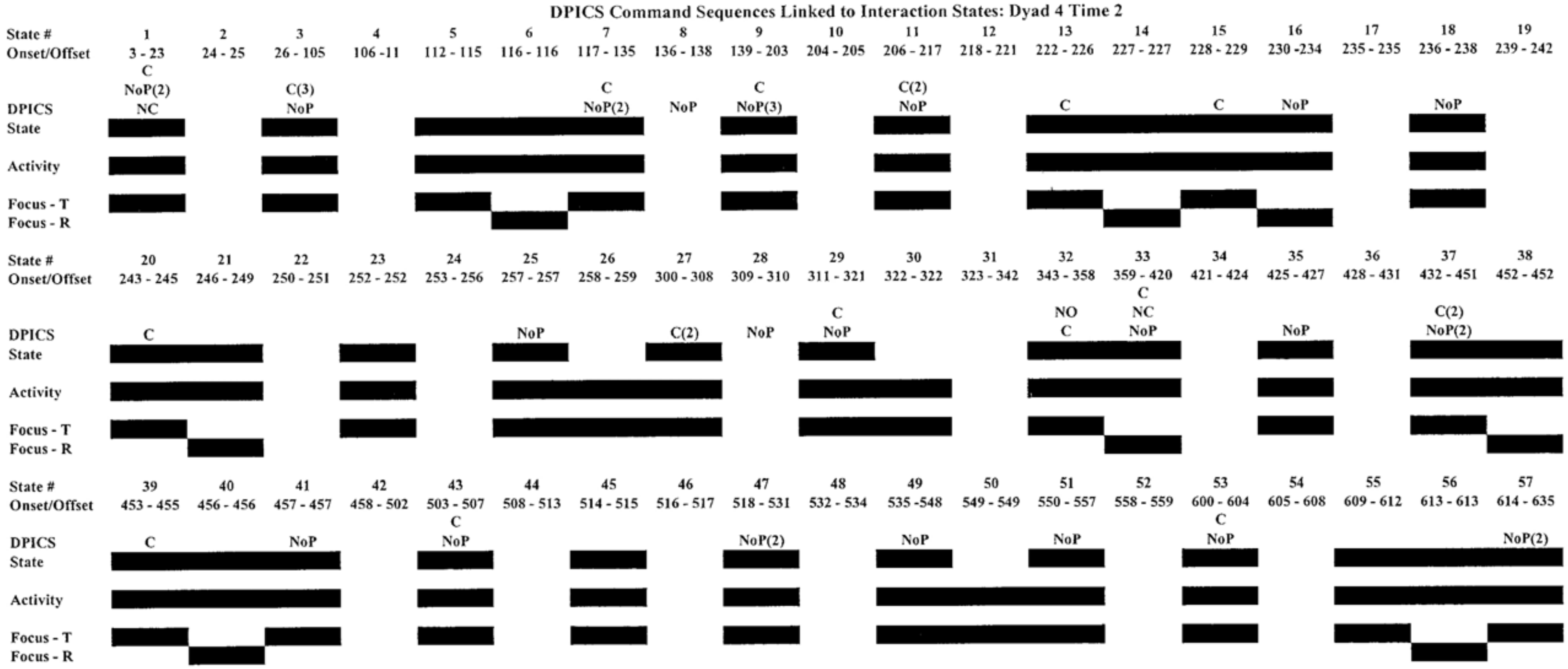
C = COMPLIANCE NC = NON CMPLIANCE NoP = NO OPPORTUNITY

DPICS Command Sequences Linked to Interaction States: Dyad 4 Time 1 (cont'd)



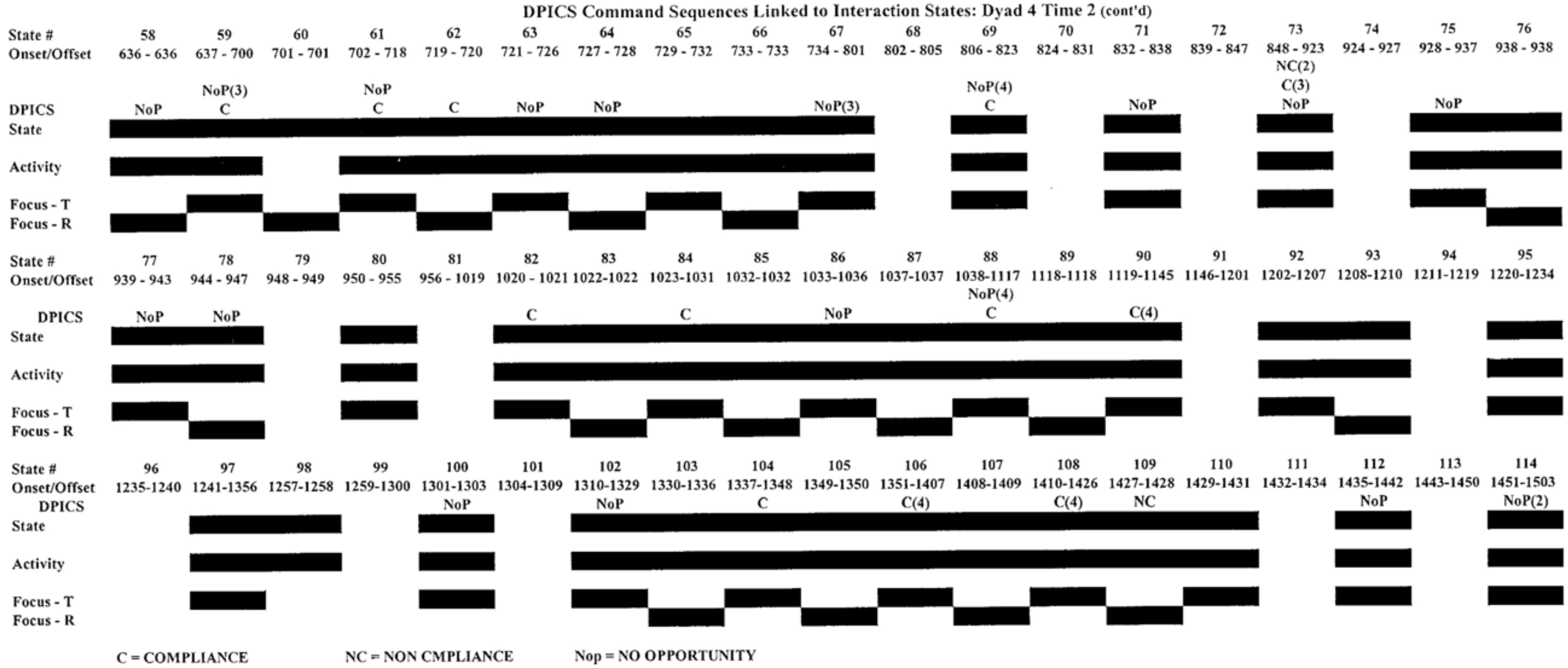
C = COMPLIANCE NC = NON CMPLIANCE NoP = NO OPPORTUNITY

DPICS Command Sequences Linked to Interaction States: Dyad 4 Time 2



C = COMPLIANCE NC = NON CMPLIANCE NoP = NO OPPORTUNITY

DPICS Command Sequences Linked to Interaction States: Dyad 4 Time 2 (cont'd)



APPENDIX D: IRB Approval

RUTGERS UNIVERSITY
Office of Research and Sponsored Programs
ASB III, 3 Rutgers Plaza, Cook Campus
New Brunswick, NJ 08901

September 5, 2007

P.I. Name: Sweet
Protocol #E07-473

Dawn M Sweet
School of Communication, Info. & Library Studies
4 Huntington Street
College Avenue Campus

Dear Dawn Sweet:

Notice of Exemption from IRB Review

Protocol # E07-473
Protocol Title: "Communication, Indivual Development, and Well-Being: Mutuality during Moment-to-Moment Father-Son Play"

The project identified above has been approved for exemption under one of the six categories noted in 45 CFR 46, and as noted below:

Exemption Date: 8/26/2007 **Exempt Category:** Category 4

This exemption is based on the following assumptions:

1. that the materials you submitted to the Office of Research and Sponsored Programs (ORSP) provide a complete and accurate account of how human subjects are involved in your project.

2. that you will carry out your research according to the procedures described in those materials.

3. that you will report to ORSP any changes in your procedures and that if such changes are made, you will submit the project for IRB review.

4. that you will immediately report to the ORSP any problems that you encounter while involving human subjects.

5. that if any consent document(s), oral consent script(s), advertisement(s), or other documents which have the purpose of informing the subject about the research are included with this Notice of Exemption, they MUST be used per the attached version.

Additional Notes: **None**

Failure to comply with these conditions will result in withdrawal of this approval.

The Federalwide Assurance (FWA) number for Rutgers University IRB is FWA00003913; this number may be requested on funding applications or by collaborators.

Sincerely yours,

Karen M. Janes

Karen M. Janes
Associate Director, Research Integrity and Compliance
janes@orsp.rutgers.edu

cc: Dr. Hartmut Mokros

References

Anderson, E. (1994). Sex codes among inner-city youth. In J.Garrison, M. D. Smith & D. J. Besharov (Eds.), *Sexuality, poverty, and the inner city* (pp. 1-36). Menlo, CA: Kaiser Family Foundation.

Bakeman, R., & Gottman, J. (1997). *Observing interaction: An introduction to sequential analysis* (2 ed.). Cambridge: Cambridge University Press.

Bartlett, F. C. (1932). *Remembering: A study in experimental ad social psychology*. Cambridge: Cambridge University Press.

Bateson, G. (1955). A theory of play and fantasy. *Cultural, anthropological, semantic and communication approaches*, 39-51.

Bateson, G. (1996). Communication. In H. B. Mokros (Ed.), *Interaction and Identity: Information and behavior* (Vol. 5, pp. 45-70). New Brunswick, NJ: Transaction.

Bronfenbrenner, U. (1979). *The ecology of human development*. Cambridge: Harvard University Press.

Brown, R., & Gilman, A. (1960). The pronouns of power and solidarity. In T. A. Sebeok (Ed.), *Style in language* (pp. 253-276). Cambridge: The M.I.T. Press.

Chafel, J. A., & Gold Hadley, K. (2001). Poverty and the well-being of children and families. In C.W.Walker & M. Roberts (Eds.), *Handbook of Clinical Child Psychology* (pp. 48-71). New York: John Wiley & Sons, Inc.

Coan, H. (2003). Gender matters: Travails in becoming a dancer. In H. B. Mokros (Ed.), *Identity matters: Communication-based explorations and explanations* (pp. 187-215). Creskill, NJ: Hampton Press.

Cockett, L. S. (2000). *Self, other, and situation in collaborative context: A study of personhood in a group decision-making meeting.* Unpublished doctoral dissertation, Rutgers University.

Collins, W. A., Maccoby, E. E., Steinberg, L., Heatherington, E. M., & Bornstein, M. H. (2000). Contemporary research on parenting: The case for nature and nurture. *American Psychologist, 55,* 218-232.

Deater-Deckard, K., & G, O. C. T. (2000). Parent-child mutuality in early childhood: Two behavioral genetic studies. *Developmental Psychology, 36(5)*, 561-580.

Deater-Deckard, K. and S. A. Petrill (2004). Parent-child dyadic mutuality and child behavior problems: Gene-environment processes. *Journal of Child Psychology and Psychiatry* 45 1171-1179.

Duncan, S. J., Fiske, D. W., Denny, R. D., Kanki, B. G., & Mokros, H. B. (1985). *Interaction structure and strategy*. Cambridge: Cambridge University Press.

Duncan, S. & Fiske, D. (1977). *Face-to-face interaction: Research, methods, and theory*. Hillsdale: Lawrence Erlbaum Associates.

Eisenberg, N. & Miller, P. A. (1987). The relation of empathy to prosocial and related behaviors. *Psychological Bulletin, 10,* 91-119.

Eisenberg, N. & Fabes, R.A. (1990). Empathy: Conceptualization, measurement, and relation to prosocial behavior. *Motivation and Emotion* (14)2, 131-149.

Eyeberg, S. M. and E. A. Robinson (1983). Dyadic Parent-Child Interaction Coding System: A manual. *Psychological Documents 13.*

Feshbach, N. D. (1978). Studies of empathic behavior in children. In B. A. Maher (Ed.), Progress in experimental personality research, New York: Academic Press.

Gottman, J. M., & Roy, A. K. (1997). *Sequential analysis: A guide for behavioral researchers*. Cambridge: Cambridge University Press.

Grimm, L. G., & Yarnold, P. R. (2001). Analysis of Cross-Classified Data. In *Reading and Understanding Multivariate Statistics* (pp. 169 - 215). Washington D.C.: American Psychological Association.

Gross, D., Garvey, C., Juliion, W., Fogg, L., Tucker, S., & Mokros, H. B. (2008, under review). Efficacy of the Chicago Parent Program with Low-Income African American and Latino Parents of Young Children. *Prevention*.

Harrist, A. W., & Waugh, R. M. (2002). Dyadic synchrony: Its structure and function in children's development. *Developmental Review*, *22*, 555-592.

Kahneman, D., Diener, E., & Schwarz, N. (1999). Preface. In D. Kahneman, E. Diener & Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. ix-xii). New York: Russell Sage Foundation.

Kendon, A. (1990). Conducting interaction: patterns of behavior in focused encounters New York, Cambridge University Press.

Kidwell, M. (2005). Gaze as Social Control: How very young children differentiate 'the look' from a 'mere look' by their adult caregivers. *Research on Language and Social Interaction, 38,* 417-449.

Knoke, D., & Burke, P. J. (1980). *Log-Linear Models*. Beverly Hills: Sage.

Kochanska, G. (1997). Mutually responsive orientation between mothers and their young children: Implications for early socialization. *Child Development 68,* 94-112.

Lerner, G. H., & Zimmerman, D. H. (2003). Action and the Appearance of Action in the Conduct of Very Young Children. *Gesture, 3*(2), 155-185.

Lindsey, F. W., Mize, J., & Pettit, G. S. (1997). Mutuality in parent-child play: Consequences for children's peer competence. *Journal of Social and Personal Relationships, 14*, 523-538.

Maccoby, E. E. (2000). Parenting and its effects on children: On reading and misreading behavior genetics. *Annual Review of Psychology, 51*, 1-27.

Maccoby, E. E., & Martin, J. A. (1983). Socialization in the context of the family: Parent-child interaction. In P. H. Mussen (Ed.), *Handbook of child psychology* (4th ed., Vol. IV: Socialization, personality, and social development). New York: John Wiley & Sons.

Maccoby, E. E. (1992). "The role of parents in the socialization of children: An historical overview." Developmental Psychology 6: 1006-1017Maccoby, E. E. (2000). Parenting and its effects on children: On reading and misreading behavioral genetics. *Annual Review of Psychology, 51*, 1-27.

Marsiglio, W. (1993). Contemporary scholarship on fatherhood: Culture, identity, and conduct. *Journal of Marriage and the Family, 14*(4), 484-509.

McAdoo, J. (1979). A study of father-child interaction patterns and self-esteem in Black pre-school children. *Young Children, 34*, 46-53.

McQuown, N. A. (1971). The natural history of an interview. Microfilm collection of manuscripts on cultural anthropology, No. 95, series XV, University of Chicago.

Minuchin, S., Rosman, B. L., & Baker, L. (1978). *Psychosomatic families*. Cambridge: Harvard University Press.

Minuchin, S. (1974). *Families & familiy therapy*. Cambridge: Harvard University Press.

Mokros, H. B., Mullins, L. S., & Saracevic, T. (1995). Practice and personhood in professional interaction: Social identities and information needs. *LISR*, 237-257.

Mokros, H. B. and S. Deetz (1996). What counts as real? A constitutive view of communication and the disenfranchised in the context of health. Communication and the disenfranchised: Social health issues and implications. E. B. Ray. Hillsdale, NJ, Erlbaum: 29-44.

Mokros, H. B. (1984). *Patterns of persistence and change in the sequencing of nonverbal actions.* Unpublished doctoral dissertation, University of Chicago.

Mokros, H. B. (2003). A constitutive approach to identity. In H. B. Mokros (Ed.), *Identity matters* (pp. 3-28). Cresskill: Hampton Press, Inc.

Pittenger, R., Hocket, C., Danely, J. (1960) The first five minutes: A sample of microscopic interview analysis. New York: Martineau.

Rapport, J. L., & Ismond, D. R. (1996). Developmental abnormalities in the first years of life. In *DSM-IV training guide for diagnosing childhood disorders* (pp. 77-102). New York: Brunner-Routledge.

Rasheed, J. M. and M. N. Rasheed (1999). Social work practice with African American men: the invisible presence. Thousand Oaks, Sage.

Roopnarine, J. L. (2004). African American and African Caribbean fathers. The role of the father in child development. M. E. Lamb. Hoboken, New Jersey, John Wiley & Sons: 58-97.

Ruesch, J., & Bateson, G. (1987). *Communication: The social matrix of psychiatry*. New York: W.W. Norton & Company.

Sackett, G. P. (1979). The lag sequential analysis of contingency and cyclicity in behavioral interaction research. In J. D. Osofsky (Ed.), *Handbook of infant development* (pp. 623-649). New York: Wiley.

Sameroff, A. (1975). Early influences on development: Fact or fancy? *Merrill-Palmer Quarterly, 21*, 267-294.

Sampson, R. J. & Labmb, J. H. (1994). Urban poverty and the family context of delinquency: A new look at structure and processes in a class study. *Child Development, 65,* 523-540.

Scheff, T. (1990). *Microsociology: Discourse, emotion, and social structure*. Chicago: University Of Chicago Press.

Secombe, K. (2000). Families in poverty in the 1990s: Trends, causes, consequences, and lessons learned. *Journal of Marriage and the Family, 62,* 1094-1113.

Seligman, M., & Csikszentmihalyi, M. (2000). Positive psychology: An Introduction. *American Psychologist, 55,* 5-14.

Smith, C. A., M. D. Krohn, et al. (2005). African American fathers: Myths and realities about the involvement with their firstborn children. *Journal of Family Issues 26*, 975-1001.

Sullivan, H. S. (Ed.). (1953). *The interpersonal theory of psychiatry*. New York: W.W. Norton & Company.

Titchener, E. (1909). *Experimental psychology of the thought process*. New York: Macmillan.

Watzlawick, P., Beavin, J. H., & Jackson, D. D. (1967). *Pragmatics of human communication: A study of interactional patterns, pathologies, and paradoxes*. New York: W.W. Norton & Company Inc.

CURRICULUM VITA

DAWN M. SWEET

Education

2002 – 2008	Rutgers – The State University of New Jersey School of Communication, Information and Library Studies Ph.D., May 2008
1995 – 1998	The College of New Jersey M.A., English, 1998
1990 – 1993	Kean College B.A., English/Secondary Education, May 1993

Positions Held

2006 – current	Research Consultant, SUNY Buffalo
2006 – current	Senior Behavior Analyst/Trainer, VisualEmotion, LLC
2004 – 2008	Lecturer, The Graduate School of New Brunswick
2004 – 2006	Graduate Assistant, Rutgers University, Department of Communication
2004	Research Assistant, Rutgers University, Department of Communication
2003 – 2006	Part-Time Lecturer, Rutgers University, Writing Department
2003 – 2005	Part-Time Lecturer, Rutgers University, Department of Communication
2002 – 2004	Graduate Assistant, Rutgers University Center for Organizational Development and Leadership/Johnson & Johnson