Parental Involvement in the Habilitation Process Following Children’s Cochlear Implantation: An Action Theory Perspective

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Action theory and the qualitative action-project method are used in this study to address and illustrate the complexity of parenting children who have received cochlear implants (CIs) as well as the intentionality of parents engaged in that process. “Action” refers to individual and joint goal-directed and intentional behaviors. Action theory has the advantage of using the perspectives provided by manifest behavior, internal processes, and social meaning in the analysis of action. Two cases are used to describe the individual and joint actions and projects, as related to parents’ involvement in the habilitation process of children’s postcochlear implantation. These joint projects are described at the levels of meanings/goals, functional processes, behaviors, structural support, and resources. From the rich descriptions and analysis of the cases, we draw potentially illuminative implications for the “current thinking” in relation to parenting children with CIs.

The habilitation process following pediatric cochlear implantation rests heavily on parental involvement in a number of important dimensions, many of which are considered in the current research. First, parents are actively involved in the habilitation process of their children. Second, parents engage in daily intentional behaviors over time, envisioning an end result for their child. Third, these behaviors have meaning for parents. Fourth, parents’ actions do not occur in a vacuum. Rather, both parents and their children engage together in activities/pursuits. In addition, others, such as professionals, are also involved in the habilitation process. In this study, we used two cases to illustrate an action theoretical perspective of these dimensions of parenting children with cochlear implants (CIs). The action theoretical perspective (Valach, Young, & Lynam, 2002) and its related action-project method are proposed as heuristics for researching parenting children with CIs and parents’ involvement in their children’s habilitation process.

Parenting Children With CIs

Cochlear implantation has become an increasingly common habilitation option for children who are deaf (Spencer & Marschark, 2003). An increasing body of research demonstrates improvements in children’s functioning after cochlear implantation, in particular their spoken language and ability to communicate (e.g., Bat-Chava, Martin, & Kosciw, 2005; Blamey et al., 2001; Connor, Hieber, Arts, & Zwolan, 2000; Geers, Nicholas, & Sedey, 2003; Svirsky, Robbins, Kirk, Pisoni, & Miyamoto, 2000). Successful outcomes following cochlear implantation are neither conclusively assured nor immediate (e.g., Geers, 2004), and significant variability in children’s outcomes following cochlear implantation has been reported (Bat-Chava et al., 2005; Purdy, Chard, Moran, & Hodgson, 1995;
Sach & Whynes, 2005; Spencer, 2004; Spencer & Marschark, 2003; Svirsky et al., 2000). Continuing habilitation efforts are necessary after cochlear implantation in order to make the procedure effective (Christiansen & Leigh, 2002).

It has been suggested that the role of parents throughout the habilitation process is one of the many factors found to enhance the benefits of CI use and eventually the child’s progress (Allegretti, 2002; Geers & Brenner, 2003; Spencer, 2004). Moreover, Desjardin, Eisenberg, and Hodapp (2006) suggested that parental involvement and self-efficacy are two family factors that account for the variance in children’s communication development following cochlear implantation. In trying to understand parents’ influence on children’s outcomes, Spencer (2004) examined different behavioral indicators of parental involvement related to their children’s education and development both before and after cochlear implantation. Findings indicated an association between high levels of parental involvement, for example, learning sign language, advocating for their child’s needs, devoting time and effort to take their child to the CI clinic for follow-up, and monitoring children’s language achievement.

In a study of parents’ perceptions of their involvement related to their children’s CI use, Desjardin (2004) found that mothers’ higher sense of involvement was associated with mothers’ enhanced language facilitation strategies and their children’s improvement in language abilities.

The above-mentioned studies on parental involvement emphasize its positive effect on children’s language outcomes following cochlear implantation. Likewise, these studies underline the importance of understanding what parents are doing in their day-to-day life with their children, as well as parents’ perceptions of their own involvement. At the same time, the studies relied only on parents’ retrospective accounts and did not account for parents’ intentional actions as oriented toward reaching goals specific to the parents’ role in their child’s habilitation and the promotion of his/her outcomes following cochlear implantation. Nonetheless, Dix and Branca (2003) highlighted the important role of goal-directed behavior in understanding parenting. In their theoretical model, goals have an organizational role in guiding parenting actions and change in actions, and as such, goals are pivotal in determining parenting practices (Dix, 1991; Kuczynski, 1984). Moreover, the research on parental involvement has centered around causal explanations and avoided looking at the unfolding nature of parents’ and their children’s joint processes over time. Finally, without doubting the importance of examining only parents’ behaviors, it is vital to consider simultaneously parents’ subjective internal process (i.e., cognitions, emotions, and meaning) that accompany their behaviors and practices. The consideration of parents’ internal process can be extremely valuable in gaining a better understanding of parents’ behaviors and experiences following their children’s cochlear implantation. For example, in trying to explain the low scaffolding abilities of hearing mothers of deaf children, Jamieson and Pedersen (1993) suggested possible explanations that are based on mothers’ internal process, that is, mothers’ emotional response to their child’s deafness and maternal sense of competence.

Previous research looking at parents’ internal experiences demonstrated that caring for a child with a CI and executing habilitation requirements have been found to affect parents’ emotional and cognitive experiences. Parents of children with CIs have been reported to experience distress at various times over the course of the child’s habilitation (Beadle, Shores, & Wood, 2000; Purdy et al., 1995; Quittner, Steck, & Pouiller, 1991; Richter et al., 2000; Spanh, Richter, Burger, Löhle, & Wirschang, 2003; Weisel, Most, & Michael, 2007; Zaidman-Zait & Most, 2005). In addition, parents reported various challenges that they face, such as adjustments necessitated by the needs and behaviors of the implanted child, time and effort demands, and stress induced by the intervention program (Sach & Whynes, 2005). Most previous research on parents’ internal experiences has employed a stress and coping standpoint, which has important implications for both theory and intervention. Nonetheless, it limits our understanding and knowledge of other complex emotional and cognitive processes involved in parenting children with CIs. For instance, parents were found to hold positive views and be satisfied regarding their children’s communication skills, social relationships, and general functioning following cochlear implantation (Beadle et al., 2000; Chmiel,
Sutton, & Jenkins, 2000; Christiansen & Leigh, 2002; Meadow-Orlans, Mertens, & Sass-Lehrer, 2003); at the same time, parents might experience difficulties when interacting with their child and modify their expectations accordingly. Research exploring parental emotional experiences has often disregarded various internal experiences included in parents’ daily joint engagement with their children.

In sum, in order to increase our knowledge of parenting responses to having a child with a CI and parents’ involvement and influence on their child’s progress over time, a wider perspective that examines parents’ behaviors in the context of their daily life and integrates behavior, meaning, function, internal process, and structure and strives to capture process, is needed.

**Action Theoretical Conceptual Framework**

Our view is that researching parenting children with CIs and parental involvement in the habilitation process following cochlear implantation from an action theory will provide a new understanding of the complexity and intentionality of parents’ and children’s joint action in the context of the habilitation process. Action theory may be particularly useful for this because it is a framework and a language for understanding and researching applied tasks in which people engage in their everyday lives (Valach, Young, & Lynam, 1996). Action theory argues that human behavior is intentional and goal directed, though not always rational (Valach et al., 2002). Action is understood as a complex multidimensional phenomenon. Three dimensions of action theory are involved in conceptualizing action and in research that is based on this theory (see Table 1): action systems, levels of action, and perspectives on action (Young, Valach, & Domene, 2005).

Action systems refer to individual action, joint action, and projects. Action consists of specific goal-directed behaviors that occur in contiguous time (Young, Valach, & Marshall, in press). Actions may be considered at the individual level in terms of goals, functional steps, and specific behaviors. However, many of the same actions are also joint, that is, occurring between people. When a series of actions, constructed as having common goals, are linked across a mid-term length of time, one may speak of a “project” (see Figure 1). A project is something that an individual or people jointly and intentionally work toward for a longer period. Projects encompass more than what can be accomplished in the immediate term and yet have some form of end point (i.e., when goals are accomplished). People engage in individual and joint actions to carry out their projects. The majority of projects in which people engage in daily life are social in nature and, therefore, involve more than one individual (Valach et al., 2002).

The other two dimensions of action theory refer to the levels at which action and projects are organized and operate. Action is hierarchically organized: the goal of an action is considered at the highest level and represents the meaning of action processes. Goals are the overall intentions of those engaged in the action (Young, Valach, & Domene, 2005; Young, Marshall, et al., in press). Goals are defined by their cognitive qualities and social meaning and are structured as superordinate and subordinate, with some goals subsuming others. At the medial level of action organization are the functional steps. Functional steps are a sequence of contiguous specific verbal and nonverbal behavioral elements that have a common function. Functional steps are the intentional means (e.g., strategies, plans) by which people move toward their goals, steer and direct both the course of an action and its goal, and energize it with emotion.

At the lowest level are the specific conscious and unconscious, verbal and nonverbal, behavioral elements involved in the performance of an action (e.g., asking a question, shifting gaze, pointing). In addition, action theory emphasizes the relevance and consideration of resources, knowledge, and skills available in performing an action. These resources can either facilitate or inhibit the implementation of an action.

Action is also viewed from three distinct perspectives (see Figure 1), which occur in a nonhierarchical fashion. One may observe action as it manifests in verbal and nonverbal behavior; consider action based on the cognitions and emotions that steer, guide, and accompany the action (i.e., internal process); and understand action from its social meaning as having goals and representing intentionality.
Action theory and the action-project method can be used as a conceptual framework to explore the specific intentional goal-directed, individual and joint action of parents and their children with CIs in the context of their daily life, although simultaneously considering different perspectives (manifest behaviors, internal process, and meaning) and striving to capture processes over time. Action theory and the action-project method can provide a way to extend our understanding based on the “causal” model of parenting behaviors and children’s outcomes, by viewing parents’ involvement in the habilitation process as a joint project comprising a complex process of ongoing individual and parent–child joint actions embedded within context and occurring over time. Action theory and the action-project method provide a research approach that allows the investigation of interactions between parents and children as they engage in

### Table 1  The three-dimensional conceptual framework of action: action systems, levels of action, and perspectives on action

<table>
<thead>
<tr>
<th>Concept</th>
<th>Definition</th>
<th>Example</th>
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<tbody>
<tr>
<td>Action systems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual action</td>
<td>Specific goal-directed behaviors that occur in contiguous time by an individual</td>
<td>Reading information on a Web site</td>
</tr>
<tr>
<td>Joint action</td>
<td>Specific goal-directed behaviors occurring between people</td>
<td>Having a conversation, playing a game</td>
</tr>
<tr>
<td>Project</td>
<td>Series of actions, having a common goal, linked across a midterm length of time. A project is something that an individual or people jointly and intentionally work toward for a longer period</td>
<td>The joint project between the son and his mother appears to be focusing on and developing the skills and abilities that will help the son to communicate easily with others</td>
</tr>
<tr>
<td>Levels of action</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elements</td>
<td>The specific conscious and unconscious verbal and nonverbal behavioral elements that are involved in the performance of behavior</td>
<td>The action of having a conversation may involve elements such as statements of opinion, question statements, smiles, sitting on a carpet</td>
</tr>
<tr>
<td>Functional steps</td>
<td>A sequence of contiguous elements that have a common function. Functional steps are the intentional means by which each participant moves toward their goals</td>
<td>Functional steps in a parent–child joint action may include eliciting child engagement, directing child’s attention, and regulating child’s behavior</td>
</tr>
<tr>
<td>Goal</td>
<td>Goals are the general, overall intentions and purposes of people who are engaged in the action. A goal represents the meaning of action processes</td>
<td>The goal of a parent during a play activity with his child may be to have enjoyable interaction</td>
</tr>
<tr>
<td>Perspectives on action</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manifest behavior</td>
<td>The observable sequence of behavior that is involved in carrying out an action</td>
<td>Sorting cards game according to their colors, reading a book</td>
</tr>
<tr>
<td>Internal processes</td>
<td>The subjective thoughts and feelings that a person is experiencing during the action</td>
<td>A parent/child might feel: happy, frustrated, irritated, angry</td>
</tr>
<tr>
<td>Social meaning</td>
<td>The explanations that people give when describing actions to others, including the intentions and purposes that they provide about the action in question</td>
<td>A parent explains his actions: “I was trying to check whether my child can label the different objects in the picture”</td>
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joint activities in response to the child’s cochlear implantation. Parents’ goals are both prefigured and coconstructed through their joint interaction process with their children (Young & Valach, 2004). This notion is also reflected in the recent view of socialization as a process of mutual participation and involvement of children and their caregivers (Rogoff, 1991). Finally, as mentioned above, action theory has the advantage of simultaneously considering multiple perspectives on parents’ action (manifest behavior, internal process, and meaning). As such, it can connect emotional processes, such as distress and anxiety, with parents’ involvement and practices.

The purpose of the current research was to describe from an action theoretical framework the individual and joint action and projects that mothers engage in over time with their young children as a response to the changes and possibilities brought about by the CI. A central research goal was to demonstrate the way in which action theory is able to increase the understanding of parental involvement and the complexities of parenting a child with a CI. This study employed the instrumental case study method, which is important because it uncovers knowledge (Luck, Jackson, & Usher, 2006) and provides insight about the phenomena of interest (Stake, 2005). The study of the particular in case study research facilitates a necessary depth of understanding if we are to illuminate parenting action processes. Instead of an emphasis on generalization, here the purpose was to demonstrate an innovative theoretical framework that serves to facilitate our understanding of a larger phenomenon.

Within each case, a modification of the Qualitative Action-Project method (Valach et al., 2002; Young, Valach, & Domene, 2005) was used. This method meets the standards for rigorous qualitative research. It involves collecting different types of data on the same phenomenon: actual pertinent behaviors are video recorded and retrospective self-reports of the videotaped data are gathered through interviews; internal processes (cognitions and emotions) about these behaviors and meaning attributed to the data are gathered from participants by playing that data back to them and inviting their recollections on it; and participant feedback is also incorporated through interviews, including the telephone monitoring interviews.

Method

This study was part of a larger research project examining parental experiences following their child’s cochlear implantation. In this study, we used two cases to illustrate the way in which action theory is able to increase the understanding of parental involvement and the complexities of parenting a child with a CI.
The purpose of action-project method is to illuminate and describe the experiences of parents and their children and to generate a complete description of a phenomenon. As such, the method yields results that are descriptive rather than explanatory or predictive. Therefore, action theory research is unable to determine whether and in what manner the specific actions of parents and children are causes of the child’s progress (or hindrance).

Procedures

The study was reviewed and approved by the university’s research ethics board. Mothers were recruited from the Cochlear Implant Services Program at British Columbia Children’s Hospital. Background information on the participants is provided in the findings for each case. Interviews and observations were conducted in the participants’ home. Data collection involved the following stages, as shown in Figure 2.

Stage 1: Completion of background questionnaire. Mothers completed a background questionnaire. This questionnaire tapped family demographics (parents’ education level, number of children, place of residence, and hearing status of siblings and parents); information about the child (degree of hearing loss, age, gender, etiology of deafness, communication modality, educational setting, age at onset of intervention, and additional problems); and information on the cochlear implantation (date of surgery and complications). Mothers also reported on their children’s vocabulary development using the MacArthur Communication Developmental Inventory (CDI), which is the standard parent checklist for measuring early language development in hearing children (Fenson et al., 1994) and used with parents of children with hearing loss (e.g., Mayne, 1998).

Stage 2: Introductory interview. In an introductory interview with each mother, guided by action theoretical framework, mothers were asked about their experiences of having a child who is deaf, about their current goals and concerns regarding their child and their parenting, about the ways in which they address those concerns/goals, and about their daily activities. The mothers were also requested to comment on how they are involved in and attempt to influence aspects of their child’s life. (Although each child was seen regularly by a speech-language pathologist [SLP], only the mother and child were involved in the actual data collection.)

Stage 3: Mother–child joint activity. Following the initial interview, mothers were invited to engage in a joint activity with their child in the absence of the researcher. This session included two parts. First, mothers were given the freedom to generate and direct a typical activity that they engaged in frequently with their child at home (e.g., playing together, conducting language activities, reading a picture book) for approximately 10 min. Next, the researcher introduced a set of toys to the mother and child. Mothers were invited to continue to engage in a joint activity with their child for an additional 10 min. The self-generated and self-directed nature of the interaction allowed the dyad to engage in a joint activity using their natural, ongoing style of interaction. These activities were videotaped.

Stage 4: A video recall procedure. Following the mother–child joint activity, mothers participated in a video recall procedure, known as the “self-confrontation procedure” in action theory (i.e., individually viewing with the researcher a playback of the interaction they had had with their child). Mothers were asked to view
the interaction and to stop the videotape whenever they wanted to comment on what was taking place. Alternatively, the researcher stopped the videotape at approximately 1-min intervals and explicitly asked the mothers to comment regarding their thoughts, feelings, and actions at the time of the interaction. Video recall permits participants’ internal processes to be accessed. Next, semistructured follow-up questions were asked to explore any relevant topics that may have emerged. Subsequently, the interview, interaction, and the self-confrontation were transcribed and analyzed (described below). This preliminary analysis served as the basis for the development of a short summary of mothers’ joint and individual actions and goals/project. The summary was presented at the beginning of the first follow-up conversation between the mother and the researcher.

Stage 5: Telephone log monitoring procedure. Four structured telephone interviews were conducted monthly with the mothers for 4 months. The purpose of these interviews was to collect additional information regarding the mothers’ individual and joint actions (projects) and discuss their progress in achieving their goals. In these conversations, mothers were asked about their current goals and concerns, to describe their joint activities with their children, to describe any thoughts and feelings that they were having, and to report on goals they achieved and any barriers encountered.

Data Analysis

The qualitative analytic protocol of the action-project method was used (for details see Young, Valach, & Domene, 2005). The data were analyzed according to the three levels on which action is organized, that is, goals, action steps or functions, and action elements. The analysis of all data sources (interview, self-confrontation procedure, and mother–child interaction) occurred simultaneously. All data sources were transcribed and coded from both “bottom-up” (i.e., coding of specific units that make up the action) and “top-down” (i.e., identification of the intentional framework, or overall goal of entire sequence of action) perspectives.

Analysis steps. The videotapes of the mother–child interactions were coded utilizing Transana Software (available online: http://www.transana.org). All mother and child verbal and nonverbal behaviors during the joint activity were transcribed. There were four general steps in the analysis process:

1. The identification of both the mother’s and child’s overall joint intention for the action, that is, the intentional framework, based on a thorough reading of the mother’s interviews and the video recall transcript and viewing the videotape of the mother–child joint activity.

2. A detailed analysis of the language and behavior of the joint activity. The mother–child joint activity sequence was divided on the basis of the intervals of the video recall procedure. Each interval was coded according to the three levels on which action was organized, that is, goals, action steps or functions, and action elements for both the mother and the child. The actual words, expressions, and behaviors used in the joint activity (i.e., the elements) were coded using labels such as asking question and showing. Then the elements were grouped into functional steps or means that the participants used to reach their goals. The goal for each interval was identified while incorporating both information from the participants’ behaviors and, for the mothers, information from the video recall procedure. This process ensures the integration of manifest behavior, internal process, and social meaning in understanding action. Furthermore, the joint action was analyzed at the dyadic level, where any change in goals and/or functional steps between the mother and the child were noted. This process resulted in description of the goal regulation process. (See example of the analysis in Table 2.)

3. An action theory content analysis of the transcripts of the telephone conversations and final analysis that was based on the whole data set for each dyad. The purpose of this analysis was to describe the process of the joint actions over time (5 months). The actions taken by the participants over time were identified. Attention was paid to each mother’s reports on her emotions, cognitions, and attributed meaning attached to actions and her evaluation of the progress of the project and its associated outcomes.

4. Summary of all the analysis steps, resulting in a narrative description of each dyad’s overall project,
Table 2  Interval from the joint activity of Jacob and his mother, analysis, and video recall

<table>
<thead>
<tr>
<th>Case 2: interval #5 (coding of elements is in italics)</th>
<th>Mother’s functional steps and goal</th>
<th>Child’s functional steps and goal</th>
<th>Mother’s report on internal process</th>
</tr>
</thead>
<tbody>
<tr>
<td>M: What are you looking for? [asks question]</td>
<td>Functional steps: practice difference sounds, elicit engagement, respond to child’s initiation, reflects and enacts child’s action, regulates child’s behavior</td>
<td>Functional steps: animates object (makes sounds, operate object)</td>
<td>I think he, he’s just having fun especially if it’s something where he can get a reaction from me…. It’s either he’s gonna do it and I’ll be very happy and excited, or he’s not gonna do it and there’s gonna be a little disappointment. So there’s a lot more emotion going on and you also feel that if you do something where he has, is supposed to do something and he’s not doing it, that um, you’re maybe doing it wrong, or you should do it more often, or maybe you should do it in different ways. So, your head starts to think about it a lot more and in these kinds of activities it’s easier to, to do it…. Practicing with him sometimes comes natural because I went through the process already [with the other son]… sometimes I think, oh this is a good moment to introduce … it’s mainly in this way, where I just present sounds and not so much where I expect from him. I use the same objects as the speech therapist uses because I’m afraid if we differ too much then he will not really get the activity. So we have decided that the ooh sound will be a train etc.</td>
</tr>
<tr>
<td>J: looking at the toys in the box [investigates objects]</td>
<td>Goal: increase child’s level of interest, engage child in joint activity, to learn to discriminate and produce different sounds</td>
<td>Goal: engage in play following his interest and to involve mom in play (at times).</td>
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<tr>
<td>M: What’s that? [picks a cookie, asks question] Yummmm. Yummmm. [makes sounds]. You want some? [asks question, offers object to child] (Pause) Yummmm. [makes sounds, repeats]</td>
<td>(Note: The son shifts from engaging in solitary play with objects following his interests [e.g., playing with the horses, play with the toys in the box] and engages with mom when he is interested in the activity the mother initiates [e.g., the hopping frog] or when he invites mom to engage in his interest [e.g., snake])</td>
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<tr>
<td>J: not responding to mother. [spreads the toys and pick the snake] Ahoooooo [makes/demonstrates sounds]</td>
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<td></td>
</tr>
<tr>
<td>M: Shhhhhh. Sssssss. [makes sounds] Don’t bite me [requests] Sssssss. [makes sounds]</td>
<td></td>
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<tr>
<td>J: moving the snake toward his mother [operates the snake]</td>
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</tr>
<tr>
<td>M: Ow. Owww [makes sounds] that hurts. [describes the effect of child’s action]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J: [stands and walk away]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M: Come over here sweetie [request, expresses warmth]. Come here [repeats request]. Come sit [rephrase request, situate child beside her]. Come play with me [requests, elaborates].</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J: moves snake</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J: {Laugh}</td>
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goals, functional steps, and outcomes and, similarly, at the level of the specific joint action of the observed mother–child interaction. Both broad and detailed analyses were brought together to form an understanding of the individual and joint action of mothers and their children. A summary of the result for each case was written using action theory framework. A shortened version of the narrative summary of the analysis is presented for each case in the findings section.

Trustworthiness of the Research
As discussed by Young, Valach, & Domene (2005), the action-project method meets the criteria for validity and rigor in qualitative research of Lincoln and Guba (2000). Having three distinct types of data, that is, behaviors, recollected internal processes, and attributed social meaning, the method readily meets the criterion of triangulation. In addition, the parents in the study had the opportunity to react in detail to their data and our interpretation of it on two explicit occasions. They reviewed their joint action with their child during the video recall procedure, and they heard and responded to our initial identification of the joint action/project, based on the analysis of the video recorded action and the video recall interview, in the first telephone conversation.

Furthermore, the transcription was done by a well-trained transcriber and analyzed by the first author. Subsequently, verification step took place whereby a graduate student research assistant trained in action theory research checked the transcripts with the videos and verified the consistency of the analysis process. Finally, the second author reviewed the analysis for integrity and consistency and correspondence with action theory. In addition, the analyses were repeatedly reviewed and discussed by the authors. Mothers had the opportunity to discuss the data and findings throughout the monitoring periods, especially in the self-confrontation and the first telephone interview, and were directly involved in the formulation of their own project.

Findings
The findings illustrate the dimensions of goal-directed individual and joint action and projects that two mothers engaged in over time with their young children following cochlear implantation. The action theoretical framework is used to report the findings for each of the two cases. Each case analysis is considered at each level of the hierarchy of action systems, structures, and perspectives, described above. First, for each case, the short-term mother–child joint action is described, as this joint action is considered as part of a series of actions that ultimately are in service of the overall project. Careful attention is given to the goal regulation process during the mother–child joint activity. Next, based on all data sources, a summary describes the mother–child individual and joint actions underlining the overall identified project that occurred over 5 months, that is, from the beginning to the end of monitoring.

Narrative of Case 1: Hanna and Her Mother
Hanna, a 39-month-old girl, is an only child who lives with her parents. Hanna’s profound hearing loss, the cause of which is unknown, was diagnosed when she was 10 months old. Hanna does not have any known additional disabling conditions. She had been participating in an early intervention program since she was 12 months old. She received a CI at 21 months of age, that is, 18 months prior to the start of participation in this study. The cochlear implantation surgery went well, without any complications. At the time of data collection, Hanna attended day care three times per week and visited the intervention center for speech therapy weekly. Regarding communication modality at home, Hanna’s parents initially focused on total communication. However, oral communication has gradually been used following the cochlear implantation. At the time of the study, they used speech with some signs to support her spoken language. Hanna’s current productive vocabulary included 512 words (based on her total score on the CDI). Hanna’s mother is currently not working in paid employment, and her father works full time.

Illustration of mother–child joint action process. The mother’s overall goal in the joint action was to engage her daughter in a play activity that provided opportunity to expand the daughter’s knowledge and promote her language development. This goal related to the
mother’s parallel goal of facilitating and supporting Hanna’s learning and understanding according to her needs. The daughter’s overall goal throughout the joint action was to engage with her mother in a play activity and to solve the different problems introduced by the activity. In addition, the daughter asserted her own independence and demonstrated other goals through her actions, including indicating and pursuing her own desires, choices, and plans and expressing her needs.

The mother–daughter joint action was characterized by a high degree of cooperation and a positive tone. Both mother and daughter executed their goals by regulating their actions throughout the joint activity. In this goal regulation process, the daughter moved between being responsive to her mother’s leading and asserting her own goals. She then moved between her goal to engage with mom in play, by collaborating with her mother, following her plan, and listening and responding to her questions, and her goal to follow her own interest and choices by initiating and indicating her desires. The mother adjusted her actions based on Hanna’s actions and feedback, for example, her expressed interest and needs and the mother’s evaluation of her understanding. Evidence of this regulation process was found in the mother’s consistent goal to maintain her child’s engagement and involvement in the joint activity. The mother attained her goal by following the daughter’s interest and choices. As the mother stated in the self-confrontation: “I’m looking at her, when we’re working with something to see if she’s interested in it or not because I won’t stick with it if she’s not interested.”

In this way, the mother tried to balance taking the lead and following Hanna’s interest. For example, after introducing and reading the Good Night Teddy book, she followed her daughter’s lead while Hanna explored the book independently, flipping through the book several times. Furthermore, to maintain Hanna’s engagement, the mother recruited her attention and responded to her intentions, desires, and emotional states. She expressed interest, requested and asked questions, provided encouragements, and actively played with Hanna.

Another component of goal regulation was for the mother to maintain Hanna’s satisfaction and prevent frustrations. The mother provided support and assistance, took Hanna’s perspective, and expressed warmth and humor whenever she corrected her (see example below, which includes the coding of elements in italics).

Hanna: points to an object on the board and raises her gaze toward mom [asks for confirmation, responds, provides information].

Mother: No [disagrees] that’s an octopus [provides information, labels]. You don’t wipe your face with an octopus [provides explanation] funny girl (touches child’s cheek) [uses humor, expresses warmth]. Look [directs attention, points]. What’s in this area? [asks question] This is the picnic table [points on the board, directs attention, provides information].

Furthermore, in the video recall the mother stated: “Even though she’s put the eyes on the side of the head (playing with Mr. Potato Head), I think … if that’s what she wants, that’s fine because that’s her imagination. … as long as she’s happy and she’s playing … she’s doing fine.”

In addition, the mother instigated additional actions, related to both her overall goal to expand Hanna’s knowledge and her own perceived “teaching role” steered by the activity. For example, when Hanna played with Mr. Potato Head, the mother reflected in the video recall: “This is a great way for teaching her about body parts,” or when reading the book Good Night Teddy, the mother made associations to Hanna’s daily life. As the mother reflected: “I was showing her that, you know other, other people do what she does before she goes to bed. Ah, so it, it’s just a normal routine that every child usually does. … to let her know that she’s not the only one that does it, it’s normal.” It seems that the mother had an additional goal to convey to the daughter that she is not different from other children.

Mother: … Teddy’s having a bath like “Hanna” has. What’s that? What’s that?

Hanna: Quack. Quack.

Mother: Quack. Quack. Brushing, Teddy’s brushing her teeth. You like doing that too, don’t you?
Oh, Teddy’s got to come out here. Teddy
climbs on Daddy Bear’s lap for a bedtime story.
He’s sitting on Daddy’s lap, see. What do you do? You
sit on Daddy’s lap. Okay. Teddy gives Grandma
Bear, mommy bear a big hug. Big hug. That’s what
you do to Mommy, you know, too, at night.
Hanna: animates Teddy—puppet in the book—
doing those actions as she reads.
Mother: Teddy snuggles into bed all warm and
snug. Goodnight Teddy.

The mother’s actions reflected her cognitions
about the way one should support the learning of chil-
dren with CIs. As the mother mentioned in the in-
terview, “You have to be in the child’s world, expose
them to new experiences and information, visual
learning, modeling, repetitions, opportunities to prac-
tice, support when frustration arise, positive rein-
fforcement, feedback and, give them time to solve
problems—be patient.” For example, when the mother
observed Hanna going over the book several times, she
provided descriptions of Hanna’s activities; made asso-
ciations with Hanna’s experience; and verbalized, la-
beled, and narrated. In the video recall, the mother
said: “They say the biggest thing with a child is rep-
etition. So that’s why I think maybe where my patience
comes in. Like it didn’t bother me she could have
done the book again, for a third time….”

The joint project of Hanna and her mother was
characterized by various taxing subordinate goals in-
cluding promoting Hanna’s language development and
enhancing her literacy skills, advancing Hanna’s social
interaction skills with peers and adults, raising
Hanna’s awareness of and teaching specific strategies
regarding personal safety, and preparing Hanna for
changes in her daily routine, that is, transition to
school. All these goals and related actions over the
period of this study had a common goal as understood
by the mother, that is, preparing Hanna for the near
future specifically for the transition to preschool and
later to public school. The project was delineated by
the mother; however, it was cooperative, as both
mother and daughter engaged in actions that com-
prised the project, and Hanna was responsive to
her mother’s initiations and highly involved in the
actions.

At the level of meaning, the mother perceived her
daughter as being “prepared” by Hanna’s having ade-
quately social skill and communication competence,
which together would enable her to achieve integration
in a mainstream school environment and ensure her
well-being. The project was emotionally energized by
the mother’s concerns and hopes for her daughter’s
future. These concerns related both to Hanna’s func-
tioning and developmental process and the mother’s
role as a parent. The mother was especially worried
about whether Hanna had the capacity to develop sat-
sifying peer relationships, to fit in, for example, not be
 teased, and achieve full integration in the hearing
world. She felt anxious about whether Hanna would
succeed in school, both socially and academically, and
receive appropriate services to support her progress.
The mother stated, “I am sure that when she will go to
regular school there will be challenges, because we
heard that we have to advocate for her all the time,
until she can do it for herself, which we will try to do
at an early age.”

The mother was worried about Hanna’s safety. For
example, the fact that Hanna cannot hear her from
a distance when not using her implant could present
a potential risk factor. Consequently, the mother
reported a goal of increasing Hanna’s awareness of
her surroundings and maintaining her signing abilities
“as a safety precaution.” The mother was also con-
cerned about the adequacy of her parenting skills,
often asking herself, “Am I even doing it right?” She
described situations when she worked with Hanna
on certain skills and saw no progress over time. As
a result, she felt frustrated, discouraged.

It appears that the project had significant relevance
for the mother’s parenting identity, as part of her own
parenting project, and for her daughter’s identity. This
mother perceived parenting a child who is deaf as both
challenging and enriching and that there was a great
need to be protective and persistent. She believed she
has become a better parent by developing a deeper
capacity to deal with challenges and “not to take things
for granted.” She experienced identity growth and
development through engaging with her child. She
also believed she had a significant role in Hanna’s
habilitation, which contributed to Hanna’s apparent
progress. In Hanna’s habilitation process, the mother
adopted a teaching role. This new role fit alongside her “being her mother” role, where her main goal was to ensure Hanna’s well-being. With regard to Hanna’s identity, the mother’s goal was for Hanna to have a strong character, for example, high self-esteem and self-worth, believing that she could achieve anything she wanted to, and living her life as normally as other children.

At the level of functional steps and steering process, Hanna’s mother engaged in this project by involving her daughter in various activities where the latter had the opportunity to expand her knowledge, gain new experiences, and practice her abilities. She also taught Hanna new skills according to goals she had jointly constructed with the professionals who worked with Hanna, for example, playing games to improve her speech production and expand her vocabulary. The mother orchestrated peer interaction opportunities where she guided her daughter to behave in a socially acceptable manner by sharing toys, taking turns, repeating herself when she was not understood by others, and to practice the pragmatic use of language in everyday contexts, for example, greeting exchange. In addition, the mother made specific plans in preparing Hanna for upcoming changes by providing information, setting expectations, creating familiarity with both new environments and routines, for example, a different teacher, different teaching style, and school environment. Furthermore, the mother acted as an advocate for her, for example, requesting the local municipality to set speed bumps in their neighborhood and meeting with Hanna’s future teacher to educate her about CIs. At the same time, Hanna was functionally engaged with her mother by participating collaboratively in mother-initiated activities and demonstrating interest and motivation.

At the level of behavior, structural support, and resources, there appeared to be several structural supports and resources to carry out this project. The most salient resource explicitly identified by the mother was the availability of social support from both professionals and family. The mother’s relationship with Hanna’s SLP was helpful. The SLP offered reassurance and guidance and helped the mother to refine her parenting and teaching goals. The mother also consulted with Hanna’s day care teacher, her spouse, her extended family, and other parents: “I have a very good team to work with—we (i.e., she and husband) are the lucky ones.” Another resource was the availability of time she could spend with her daughter. In order to support Hanna’s habilitation process, the mother quit her job and devoted herself full time to supporting Hanna. Hanna’s character and temperament also supported the implementation of the mother’s plans.

In terms of process over time, the project remained salient from the mother’s perspective throughout their 5-month involvement in the study. Throughout this period, the mother reported continued progress toward achieving her goals, describing Hanna’s progress as following: “It seems that you go along for a while, then you will get a spurt and then you will go along for a while. Nothing dramatic happens and suddenly—boom—all these new words and actions are coming out.” Thus, she understood this process as progressing in qualitative changes and not simply as the addition of individual language elements.

Narrative of Case 2: Jacob and His Mother

Jacob, a 25-month-old boy, lives with his parents and an elder brother, who also has a profound hearing loss and a CI. Jacob’s profound hearing loss was diagnosed when he was 4 months old; the cause of the hearing loss is unknown. He does not have any known additional disabling conditions. He has been participating in an early intervention program immediately following the diagnosis of his hearing loss. He received a CI at 15 months of age, that is, 10 months prior to the start of participating in this study. The cochlear implantation surgery went well, without any complications. Jacob’s parents chose an oral communication approach at home, consistent with the approach of the early intervention program he attends. Jacob uses gestures and babbles when communicating with others and does not have any productive vocabulary. Jacob’s mother is currently not working in paid employment, and his father works full time.

Illustration of mother–child joint action process. The mother’s overall goal in the joint activity was to increase her son’s ability to discriminate between
sounds, utilizing different strategies she had learned. A second goal was to elicit the child’s engagement and interest in the initiated activities. Jacob’s main goal throughout the joint action was to engage in a play activity according to his own interest and choices.

The mother–son joint action was characterized by Jacob’s conditional cooperation and altering levels of enjoyment and satisfaction. This process was apparent in both the mother’s and son’s goals and in the regulation of their functional steps throughout the joint action. In this process, Jacob moved between being responsive to his mother’s initiations (i.e., being involved), although rarely initiating joint engagement, and asserting his own choices and interest mostly by engaging in solitary play (i.e., not being involved). This course of action was energized by Jacob’s emotional appraisal of the situation as pleasurable. At the same time, the mother was challenged by her need to maintain Jacob’s interest and enjoyment in order for him to engage in her action plan. In the first part of the joint action, that is, the mother’s choice of activity, she had a very clear plan, steered by her goal to practice speech discrimination while utilizing specific strategies. Functionally, the mother initiated the activity, took the lead, and controlled the sequence of the activity. She recognized the son’s interest and accordingly regulated her actions. As she stated in the video recall procedure: “I replaced it because what I want is a reaction from him. And he’s not giving it to me ... he’s not very interested. ... So, I move on.”

The mother followed Jacob’s interest as long as it was in the service of her goal. Otherwise, she restricted his action or tried to redirect his attention. For example, when they practiced Ling’s six sounds, Jacob chose to play with the snake instead of the airplane. In response, the mother followed his interest and joined him. However, when he chose to play with the horses and the barn, she did not join him and redirected his attention. At times, she had conflict around whether to continue repeating and practicing different sounds and feeling bored or changing the activity. She explained:

In this case he plays with the airplane and he plays and plays. I mean I can only say ahhhh for so long and then you know you want to move on .... It is boring because you just have to keep repeating yourself. ... there’s more interaction when a child can actually ask you something or wants to do something ... in that way it’s boring.

When the set of toys were offered to the dyad, the mother did not have a clear plan related to her overall goal, as she stated: “I let him play with it and I present whatever I can present, not that there’s a specific goal or that I know what that I’m doing.” In turn, she demonstrated more flexibility in her actions and more willingness to follow Jacob’s lead, by having child-oriented goals and facilitating and supporting his actions (e.g., putting glasses on Mr. Potato Head and not correcting when Jacob misplaced the arm on the top of the head of the Mr. Potato Head).

With regard to steering process, the mother utilized the auditory-verbal approach. She was aware of the abilities Jacob needs to acquire and be familiar with the specific exercises to practice those skills. During the video recall interview, she explained:

This is one of my techniques for discrimination .... In this case, drawing is a very nice way to indicate different sounds, by different lines. So the long lines are for ahh and the short lines are for buh buh buh.

The mother believed it was very important that her son continue to practice his skills. Hence, she believed that she should not force him to participate in activities against his will but should find ways to maintain his pleasure in them. She reflected her awareness regarding which activities increase his enjoyment and lead to further participation. For example, with regard to their play with a hopping frog, the mother said in the video recall:

He really enjoys that kind of activity .... I see he’s not interested in doing the activity where I say something and he has to imitate. He wants to see some sort of reward or, you know, something happen and that’s why I, I took the frog.

The process was emotionally steered by the mother’s expectations. As the mother explained in the video recall, when she did not expect her son to perform in a certain way, she felt more relaxed in comparison to
when she had clear expectations about his performance. When Jacob did not perform as expected, she questioned her parenting practices and skills and felt disappointment and frustration. She stated:

... it’s either he’s gonna do it and you’ll be very happy and excited, or he’s not gonna do it and there’s gonna be a little disappointment. So there’s a lot more emotion going on and you also feel that if you do something where he has, is supposed to do something and he’s not doing it, that um, you’re maybe doing it wrong, or you should do it more often, or maybe you should do it in different ways. So, your head starts to think about it a lot more and in these kinds of activities it’s easier to, to do it.... It makes me feel good that he ah, he’s doing what he’s supposed to do.

In addition, throughout the joint action the mother made choices based on her overriding goal of promoting Jacob’s language competence. At the same time, she was aware when her actions were appropriate for his level and did not expect any particular response from him. During the video recall interview she stated:

This is really advanced because here we’re talking about body parts, which is something that come once, you know they’re ready and they start to learn what are eyes, nose, ears…. You know try and get the word in as much as possible. ... just repeating it. But ... I don’t think he’s ready for that yet ... what I do is I present the names of the objects that I use. Try to repeat it as much as possible. Don’t expect him to say anything or do anything, just listen basically.

The joint project of Jacob and his mother was about working together to promote the son’s optimal oral communication competence by following and implementing clear intervention steps. The project was emotionally energized by the mother’s continued hope and expectation for Jacob’s eventual communication abilities and by a sense of concern and frustration around his progress. Approximately 1 year postcochlear implantation, Jacob’s mother had been expecting greater progress in his listening and speech production abilities than she had seen to date. These emotions of hope and expectation, in turn, motivated the mother’s actions. During the video recall procedure the mother said:

I do feel frustration sometimes, we do a lot of practicing … it [language] has to come now. You do get a little bit worried, I mean after 10 months you want to see something, but I think because my experience with my other son, it is probably not as bad as some other parents who’ll go through this the first time because I know the end result.

The joint project was intertwined with the mother’s parenting project that included the emotional regulation of her hopes and frustrations as the parent of a child with a CI.

At the level of meaning, the mother believed that she played a “supporting role” in helping Jacob to receive the maximum benefits from the CI and providing him the same opportunities as hearing children. She believed that in order for Jacob to benefit from his CI, he needed vast intervention. She also believed that this intervention was her responsibility in concert with professional support. When she witnessed progress in Jacob’s understanding or communication competence, she felt affirmed and relieved that “parenting has paid off.” The meaning of the project was affirmed for her. However, she reported that parenting a child who is deaf presented various challenges. She stated, “being a parent of a child with a CI, there are always extra worries and there are extra concerns and extra costs....” These challenges included the need to gain new knowledge about deafness and CIs and make wise decisions that had effects on both child and family life. In addition, she continued to learn to communicate with Jacob, promote his language development, and manage his CI. Emotionally, it was hard for her to accept that Jacob will “need more time to acquire language in comparison to his peers.” She described playing the role of advocate and educator of those entrusted to care for her child, such as babysitters. At the same time, one important goal for the mother was to engage with her son “just for the sake of pleasure.” During the introductory interview the mother said:

I want to have fun with him. I don’t want to see it as a chore or a task or. So instead of, you know, those typical routine things, I like to just turn on
the radio and sing and dance together or something like that.

At the level of functional steps and steering process, Jacob's mother increased his awareness of different sounds by practicing discriminating sounds—specifically, Ling's six sounds—through the use of toys. Also, she made sure Jacob wore his CI throughout the day. She had a clear plan and strategies around how she should reach her goals. This plan was informed by Jacob's SLP, who instructed and guided her. The mother believed that in order to increase Jacob's motivation to take part in language-related practice activities, she needed to maintain Jacob's interest and pleasure.

Pertaining to her parenting project, to better cope with her challenging emotions of disappointment and frustration, the mother lowered her expectation of the rate of Jacob's progress. She justified his current achievements, for example, attributing Jacob's progress to his age, attitude, and personality, or to the fact that "for some kids it takes longer." Moreover, she looked for reassurance that the CI worked for Jacob through hearing tests and trying different mapping programs. She became increasingly satisfied with any improvements, even minor ones. For example, in the follow-up interview she stated:

Sometimes I would like to see him do more, he is 2½ almost and would like him to say his first word. Still it is encouraging to see that he is progressing even though he is very slow. It is not really frustrating, I know that it takes time and every child is different and as soon as he starts school, everything will go a lot faster.

At the level of behavior as well as structural support and resources, Jacob's behavior at times worked counterproductively to the joint project. One issue the mother faced was Jacob's unwillingness to participate in speech-practice exercises suggested by his SLP: "He's not that interested in doing this with me ... it's hard for me to do these kinds of exercises ... have him sit down and do what I want him to do—that is almost impossible." The mother attempted to find her own way of dealing with certain things, including incorporating practice into daily routines: "You might have to sit down with him three times a day for short periods instead of, you know, for 45 minutes, what you normally do with the speech therapy." The mother worked at being more flexible and patient as she sought to find a balance between working with her son and maintaining her "own daily life [that she has] to lead."

Another challenging aspect of coping was dealing with Jacob's "tantrums," which encompassed situations in which he expressed his anger by removing the speech processor, taking the CI parts apart, and acting aggressively. These episodes fed into the mother's parenting project, leading her to question how she should react and regulate Jacob's behavior. Some of her strategies included insisting that her son wear his implant and trying different techniques such as putting Jacob in a "time-out." Her goal at these times was for Jacob to learn to behave in an acceptable way. She explained that she saw some of this behavior as part of normal development, "the terrible twos." However, it was especially challenging in light of the communication barrier; as she indicated, she cannot use language "to calm him down or to explain certain things, it's sometimes very hard."

One perceived resource in carrying out the project is the mother's previous experience with her elder child. This experience increased her assurance about Jacob's future progress and provided her with necessary skills and knowledge to support Jacob. She stated, "I feel good about the way I work with him. I know better what I need to do." Having this experience lowered the mother's degree of anxiety and uncertainty. Another resource was Jacob's SLP, with whom the mother jointly defined goals and action plans around promoting Jacob's language development. As the mother reflected: "We decide together what is the next step and what we should work on it, do it together. [The SLP] gives me an expert advice on language and as a mother; I fill her in, on what kind of child Jacob is."

Overall Findings

The findings demonstrated that mother–child behavior following a CI can be understood as goal-directed joint action. The mothers engaged in joint and individual meaningful processes that they understood as
facilitating their children’s progress and development following a CI. Thus, we were able to identify a joint parent–child project. In both cases, the projects were determined by the mother, and the child was brought in at the functional level; for example, the children engaged in different tasks with their mothers, and at the behavioral level they produced words, imitated, repeated, and answered questions. In addition, some of the meanings of the project for the mothers were constructed between the mothers, the professionals working with the child, and other members of the family, and this meaning had an influence on the parent–child joint process.

In both cases, the projects can be described as being “focused,” that is, being well defined, having explicit goals, and congruent functional steps (Young, Logan, Lovato, Shoveller, & Moffat, 2005). Similar to previous research where parents’ strong commitment was found to be linked with involvement in a focused project (Young, Logan, et al., 2005), both mothers demonstrated a strong commitment to pursuing their goals, which included investment of time and effort in “working” with their child on skills development. At the same time, in Case 1, at the meaning level, the project had a broader intentional framework, envisioning the child’s future life and well-being in the hearing world, whereas in Case 2, the project was operating under a narrower intentional framework—the child’s ability to use spoken language—focusing on specific steps that needed to be achieved.

These two mothers were also engaged in parenting projects, that is, “the series of goals and actions through which the parent’s role as a parent was constructed” (Young, Ball, Valach, Turkel, & Wong, 2003, pp. 297, 298). Both mothers constructed their parenting identity and role as having a child who is deaf. Having a child with a CI altered the meaning of parenting, sometimes forcing the mother to be “the teacher” of her child while at the same time maintaining images of the parent–child relationship that are not defined by the child’s hearing capacity. For both mothers, it was meaningful to establish a pleasurable “normal” mother–child relationship and to have an emotional connection with their child. In this regard, although Hanna and her mother shared this goal in their joint actions, Jacob and his mother experienced more challenges in the implementation of an action plan that focused on the quality and nature of their interactions. In addition, parenting projects encompass an evaluation function toward the construction of parenting identity. Successful attainment of goals in the joint project operated as a resource in constructing positive perceptions of parenting competence and feeling pride and satisfaction in the parenting role. On the contrary, when the project was not productive, it provoked parents to question their parenting.

These cases provide evidence of emotion as having an important role at different levels of parent–child joint actions (Young, Paseluikho, & Valach, 1997). At the goal level, emotion influenced meaning; for example, Hanna and her mother’s joint actions were driven by their shared joy while engaging with one another. On the other hand, Jacob’s mother’s frustrations around his progress and behavior posed a challenge for the project’s progress. In both cases, it was also evident that emotion functioned as a steering process, guiding and directing actions. In Case 1, the mother’s investment and efforts in working with her daughter to support her language and social competence were guided by her caring for her daughter’s emotional well-being and concerns for her daughter’s future functioning and inclusion in school. In Case 2, the mother’s actions were guided by her continued hope and expectation for her son’s eventual communication abilities and her concern and frustration around his progress.

Further, emotions also functioned in the self-regulation of behavior. In Case 2, the son responded to his mother’s initiations based on his appraisal of the situation as being pleasurable. The mother’s decreased level of interest in some of the activities and her concern in accomplishing other actions impeded her responsiveness and supportiveness of her son’s initiations. In contrast, in Case 1, the mother adjusted her actions in order to promote her daughter’s happiness and maintain her engagement in their joint action.

Lastly, the importance of available resources for the projects was apparent in both cases. In Case 1, the mother’s sources of social support, for example, family members and professionals, and the child’s characteristics facilitated the project’s progress over time. In Case 2, the mother’s knowledge and previous
experience helped her face various challenges and provided her with skills to construct goals and action plans. At the same time, the child’s lack of communication skills and consequent frustrations and the child’s occurring tantrums and lack of interest in many activities hindered the project’s progress over time.

The findings suggest that parents of children with CIs share similar challenges faced by parents of deaf children in general, including modifying communication strategies, working with professionals across a range of disciplines, learning about technological supports, and obtaining appropriate intervention programs and services (Calderon & Greenberg, 1993; Meadow-Orlans & Sass-Lehrer, 1995). It appears that parents define their actions based on their children’s needs, whether they are learning American Sign Language or adjusting to hearing aid or to a CI. What seems to be different in the case of adjusting to a CI is the intensity of parental perceptions of their need to be involved in the habilitation process of their children and their high expectations for their child’s progress.

The current findings are consistent with a large body of research (e.g., Christiansen & Leigh, 2002) that points to the necessity of intensive, long-term habilitation efforts after the CI in order to ensure the effectiveness of the whole procedure; the fact that parents perceive habilitation programs as very intense, demanding, and of long duration; and the sense that parents hold high expectations with regard to their child’s communication, social, and academic abilities (Weisel et al., 2007; Zaidman-Zait & Most, 2005). Moreover, the findings support the reflections of Weisel et al. (2007) that “parents often invest tremendous effort in the CI process and tend to develop high hopes and expectations” (p. 62). In addition, high parent expectations likely stem from very natural emotions—parents’ hope that their child’s CI will result in successful outcomes. These expectations and hopes serve a positive function. They operate effectively to inspire goal orientation and hence direct parents’ future actions and motivation (Zaidman-Zait & Most, 2005).

Discussion

In this study we sought to elucidate the use of the action theoretical framework and the action-project method to describe the individual and joint actions and projects related to parents’ involvement in their children’s habilitation process following cochlear implantation. The findings are unique because for the first time intentional, goal-directed projects and joint actions as part of parental involvement have been identified and described. This work advances our understanding of parenting children with CIs by offering a practical and theoretically grounded description of processes at different levels of action.

The use of action theory and its related method in this study represents a shift in epistemology in deafness studies. As stated by Young, Valach, & Domene (2005, p. 217) “at its heart, action is an epistemology rather than a method or conceptual framework,” moving beyond the search for causal explanations (e.g., parenting variables that affect children’s language development). This shift illustrates an alternative approach to observing parents’ and children’s behaviors in the context of their daily life, looking at the processes through which parents construct meaning. In this way, action theory contains a system of knowing that underlines the notion that knowledge and meaning are provoked and constructed through action (Young, Valach, & Domene, 2005). In addition, such an approach privileges parents’ epistemological positions by enabling them to reflect on their personal and social meaning and their thoughts and feelings through their intentional engagement in projects. Parents implicitly or explicitly answered the question, “What is this (action) about?” (Young, Valach, & Marshall, in press). Parents in this study understood and engaged with their children in joint activities that they considered as goal directed and meaningful. They interpreted their own and their child’s behavior as intentional and goal directed.

From the study’s findings, we can draw potentially illuminating implications for the “current thinking” in relation to parenting children who are deaf and specifically children who are using a CI. The promotion of child outcomes project stands as the most salient joint project identified in this study. This project relates both to the medium- and long-term effects on the child’s progress. As suggested previously (Geers & Brenner, 2003; Spencer, 2004), parents play a significant role in the habilitation process. The
findings of this study extend this notion by illustrating how parental involvement is manifested as a continuous joint process. Both parent and child are active agents contributing to and bringing goals into parent–child interactions and relationships. Furthermore, both parent and child affect and are affected by each other’s behaviors in a given action and across time (Harach & Kuczynski, 2005) while utilizing strategies to achieve their goals (Kuczynski, Harach, & Bernardini, 1999) and are jointly engaged in the coconstruction of meaning through action (Young & Valach, 2004).

Identifying and distinguishing between individual and joint goals and between goals and the functional steps to attain them offer important insights into the complexity of parental involvement in the habilitation process as it unfolds over time. For example, Spencer (2004) identified several indicators of parental involvement and later found an association between parental involvement and child language outcomes following cochlear implantation. Spencer’s (2004) important insight is limited by reporting on parent manifest behavior from a unidirectional perspective. The results of this study, however, describe involvement from a theoretically grounded method aimed at seeing how parents’ involvement markers fit within the generation of ongoing goals, functional steps, and elements. It is likely that the child’s behavior and the parent’s available resources (knowledge and skills) and internal processes (perception of their parenting competence) serve to regulate this process. Another important component of these findings is an understanding of the process of parents’ goal regulation over time and moment-by-moment during their action with their child. This coincides with the theoretical model of the organization of parent behaviors based on goal regulation systems of Dix and Branca (2003).

The current findings illustrate that parents’ actions were embedded in complex interweaving goals (i.e., parenting, parent identity, child competence, and child welfare). For instance, there was a unique challenge for parents to balance goals between those related to parental responsibilities evoked by the CI habilitation demands and those around the maintenance of an overall enjoyable relationship with the child. Successful steps toward accomplishment of this balance served to enhance parenting projects and were related to the parents’ sense of competence in their overall role. The complexity of projects has also been observed previously in the context of family career development (Young et al., 2001). Validation of concurrent projects and the exploration of the dynamic interdependencies between projects will advance our understanding of the complexity of issues and demands faced by parents.

Methodological Strengths and Limitations

There are substantial methodological merits in the use of the action-project method (Young, Valach, & Domene, 2005). In contrast to some other qualitative research methods, in action theory data are sought from three perspectives. Observing mother–child joint action provides primary access to the manifest behavior of the action, and the video recall procedure has the particular advantage of accessing internal processes and meaning. Finally, the interview provides access to a retrospective report of everyday activity and related meaning and internal process.

Although extensive and rich data were collected for each case, we acknowledge several limitations in the data collection protocol. In describing the parents’ individual and joint action and projects over time, we have included only one observation session with a video recall procedure. In addition, projects were monitored over a relatively short time period, utilizing a monthly interview. Hence, it is possible that the data collection may not have captured all the pertinent actions that contributed to the projects described. Future research should seek to investigate projects over extended periods of time and include several observation sessions that include a video recall procedure and parents’ written reports of their actions during the follow-up time period. Moreover, given the time that research of this nature takes to conduct, the depth of analysis that occurs for each participant dyad, and the difficulty of recruiting participants, it is somewhat impractical to use the procedure with large samples. Conducting case studies is sufficient to obtain a good range of experience and suggest implications for practice. However, it is likely that some patterns and constructs underlying the experiences of different families will be missed due to limited sample size.
Directions in Future Research

The current findings highlight the significant role of emotions at all levels of action (meaning, function, and behavior), as energizing steering process, and in the regulation of behavior. The affective salience of parenting has recently been addressed (e.g., Dix, 1991; Stern, 1995). However, much of the previous research in deafness has explored only a narrow range of emotion-relevant constructs, mainly parenting distress, depression, and parental stress (e.g., Meadow-Orlans, 1994; Quittner et al., 1991), and has ignored the examination of parents’ internal affective experience and specifically parents’ emotional experience while interacting with their children. The use of action theory and its method allows researchers to explore parents’ affective experiences that are embedded in parents’ actions and their interaction processes with their children. Understanding the affective experiences of parents might introduce possible explanations for the inconsistent findings regarding parental stress (Lederberg & Golbach, 2002; Pipp-Siegel, Sedey, & Yoshinaga-Itano, 2002) and for parents’ behavior while acting jointly with their children (e.g., Jamieson, 1995). Moreover, it might help in providing explanations that go beyond listing possible fixed factors that explain stress, such as the child’s communication ability, availability of social support, and child’s age. For instance, in this study, it seems that children’s responsiveness to parents’ initiations increased parental satisfaction, whereas children’s slow progress or disengagement led to parents’ disappointment and feelings of incompetence. Gaps or conflict between goals, functional steps, and behaviors that occurred in joint activities and projects might increase parental stress. The experience of stress could be related to the parenting project and the child’s habilitation project and might even act to energize these projects. Examining stress and emotional experiences from an action theoretical perspective would have significant contribution to both theory and practice. Furthermore, the action theory approach also has the advantage of being well suited to examining processes. Through the identification of projects and following them over time, one is able to identify changing perspectives, whether progress has been made, what kinds of activities parents and children engaged in, and how different projects meshed (Young et al., 2001).

Implications for Practice

Based on parental accounts, it seems that parents and professionals also coconstructed joint projects that focused on the promotion of the child’s outcomes following cochlear implantation. These projects also included constructing an understandable parental role in this process. Indeed, previous literature indicates that close mutual relationships between families and professionals in early intervention are crucial for achieving both improved parental coping and involvement in the habilitation as well as improved outcomes for the child (Dromi & Ingber, 1999; Hadadian & Merbler, 1995; Minke & Scott, 1995; Vernon & Wallrabenstein, 1984). Moreover, parents of deaf children rely greatly on professionals as sources of support (Lederberg & Golbach, 2002; Meadow-Orlans, 1994; Quittner, Glueckauf, & Jackson, 1990); professionals facilitate parents’ coping experiences (Zaidman-Zait, 2007); and professionals and parents of children with CIs engage in collaborative everyday problem solving (Zaidman-Zait, in press). The current results suggest extending notions of the parent–professional relationship to one that focuses on parent–professional co-construction of meaningful processes and outcomes through short-term joint actions and midterm projects. The conceptualization and facilitation of parent–professional joint projects present an intriguing and potentially heuristic direction for future research.

The philosophy of family-centered early intervention emphasizes families’ strengths, the empowerment of parents to support their children’s current and future learning and development, and the enhancement of parent–professional collaborative relationships (Bruder, 2000; Dunst, Trivette, Boyd, & Brookfield, 1994). If these are desired outcomes of early intervention programs, then, adopting an agentic perspective in practice and research is warranted. As illustrated in this study, action theory provides insight into the daily actions and processes of parents and children that foster the enactment of agency. Our view is that parents, in concert with important others (their children, family members, and professionals) take an
active stance toward their parenting practices and the promotion of their children’s outcomes following cochlear implantation. This understanding allows professionals working with families to consider parent promotion of child outcomes and related projects as intentional, goal-directed, and hierarchically organized system process. From the perspective of promoting families’ strengths, parental projects can be viewed through a positive frame, by asking what allows parents to be motivated in their projects and to find meaningfulness in their actions (Young & Valach, in press). Moreover, by using action theoretical language, professionals can empower parents by helping them understand themselves as self-responsible, meaning-making, and goal-directed agents. Last, action theory integrates meaning, cognitive processes, and behavior in a way that is close to human experience and is, thus, highly usable in intervention with deaf children and their families. It presents important possibilities for helping deaf children and their families understand the habilitation process as it is situated within daily contexts, as well as a way to understand how ongoing actions serve to construct successful outcomes over time. The latter could be one of the most relevant advantages of using this approach in the professional support of such families. Sharing a conceptual frame, that is, adopting a conceptualization that is rooted in an everyday theory of action, helps professionals speak the same language as the parents and implement scientific knowledge in a way parents can apply in their everyday life.

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