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Clever Connections: A Pilot Whole-Family Programme Exploring Opportunities to Enhance Carer-Child Attunement

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Quality of carer-child attunement is recognised as a significant factor in child development, yet few parenting programmes appear to provide opportunities for whole families to engage in activities exploring sound attunement. Clever Connections was developed by a psychologist–clinician in private practice as an attunement-focused pilot programme to explore a collaborative approach for families with primary-school-aged children. Concepts from critical theories, applied linguistics, sensorimotor therapies, mindfulness, narrative practice and communal practice informed the theoretical positioning which guided the programme's development. The programme, run over four sessions, was trialled with a group of four families. The first session was a three-hour block for the adults only, during which the participants' positionings and preferences were used to structure the programme. The following whole-family sessions involved a series of cooperative games, creative activities and linguistic tasks focusing on enhancing attunement. Feedback was gathered immediately following the programme regarding content and structure of the programme. Follow-up at six months indicated that sensorimotor and self-regulatory strategies explored in the programme continued to be of benefit to some of the families who participated. The outcomes suggest that further experimentation with this style of family programme is worthy of consideration.

■ **Keywords:** carer-child attunement, self-regulation, sensorimotor, neural development, whole-family programme

Attunement between people involves a state of cooperative awareness that enables neural collaborativity. This infers a sense of oneness, or what Siegel and Payne Bryson (2012) have referred to as "the sense of how we deeply connect with another person and allow them to 'feel felt'" (ch. 6). These authors also note that, "When a parent and child are tuned in to each other, they experience a sense of joining together. .. [of] belonging to a 'we'".

This sense of "we" is an important part of how carers assist their infants and children to develop their own self-regulatory systems and also the skill of empathy, which enables them to sense, and make sense of, how another experiences and responds to events. The ability to be attuned can be interrupted by the stress response of the HPA (hypothalamic–pituitary–adrenal) axis. The more stressed carers are, the less of a sense of *we-ness* is available to assist infants and children to develop sound neural integration. A carer's own prior or present traumas and stressors can influence their availability for attunement. It is not only the readily recognised types of complex trauma, however, that have an impact on child development. Many factors can prevent a carer from being safely and caringly present for, and attuned to, their child.

In my clinical work with children and families I have noticed that contemporary culture seems to add its own set of attunement-stealing factors to family life. Domestic spheres have perhaps been colonised by the corporate philosophy of productivity. Rastogi (1986) defines productivity as, "the efficiency with which output is produced by the resources utilized" (p. 148). In my therapeutic conversations with adults, it is not unusual for us to deconstruct the invitations offered by dominant cultural values to perform their

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roles in a hectic, almost panicked state, in order to demonstrate efficiency. This appears to happen not only at work but also at home. Such a state holds many similar nonverbal signals to that of being under threat – alarmed or angry facial expressions, quick jerky body movements, fast staccato prosody, inattention to immediate surroundings – and these signals are read as responses to threat by other people's neural systems, particularly by the children who are reliant on these adults for care, comfort and protection.

Another factor influencing attunement appears to be the increasing amount time spent connected to mediated experiences through screen-based electronic devices, such as computers, phones, televisions and gaming consoles, at the cost of direct human interaction (Hinkley & Brown, 2014). While there is a great deal of research about children and media usage, Rideout, Vanderwater and Wartella (2003) indicate that little is known about the overall impact of electronic media usage on infants through to preschoolers. Singer and Singer (2012) point out that authors of developmental psychology textbooks don't pay attention to the fact that, "children spend more hours watching TV programmes than talking to their parents, playing, exploring their physical environment or mastering reading" (p. 4). Without specific research into the relationship between electronic activity time and attunement abilities, one can only assume that the less time spent paying attention to the cues of other living beings, our internal experiences and the physical world around us will affect how well children are wired to notice, make sense of and respond to such phenomena.

In recognising the effects of these contemporary challenges to ordinary family life, it appears that it can sometimes be a struggle for carers to find the time and space to be with their children in attuning ways. Consequently, I began searching for programmes to which I might refer carers regarding this matter. I examined the *Resourcing Parents* website (NSW Government), which is designed to "provide. .. parenting education information to parents and carers of children aged 0–18 years". In perusing the first one hundred "parenting" events listed on the site, I found only three suggesting the participation of both parents/carers and their children. These consisted of a sole-parent support group on a Saturday afternoon (which I assumed included children although this was not explicitly stated), a baby massage workshop and a mums-and-babies' yoga class. The remaining ninety-seven events appeared to be for parents/carers only. These statistics suggested to me that most support offered to assist parenting appeared to be of a theoretical nature. There appeared to be a lack of opportunity for direct engagement between carers and their children in the advertised programmes.

Carers and parents, then, appear to be catered for separately from their children through "parenting" programmes. Given that the social attunement between carers and their children appears to be key to the development of regulatory and empathic neural pathways, there seemed to be an opening to develop an experiential family-based programme, offering activities framed by collaborative curiosity and enjoyment, that would provide opportunities to directly experience positive carer-child attunement.

These considerations led me to experiment with how a whole-family programme could be run that could provide opportunities for carers and their children to take time out and have the opportunity to attune in playful ways. As a private clinician, I felt that I could afford to explore the possibilities for such a programme, without institutional pressures of what Healy (2001) refers to as the "market driven approaches to the management of human services" (p. 1). Because so much parenting in our culture occurs within a framework of time-pressures and media-overload, I believed what people needed was time and space to *shoot the breeze* with their kids.

Theoretical Positioning

In considering factors that might help support attunement-enhancing opportunities for carers and their children, a number of theories and practices influenced my planning for the Clever Connections pilot programme. These included critical theories, applied linguistics, sensorimotor therapies, mindfulness, narrative practice and communal practice. Each of these has influenced my positioning as a therapist and I could envisage their application in the attempt to create attunement-focused family activities.

Critical Theories

The field of critical theories derives from the work of the Frankfurt School of philosophico-social theorists. Horkheimer (1972/1937), conceptualised critical theory in contrast to traditional theory. Traditional theory, he stated, tended towards maintaining the status quo, as it involved the "conservation and continuous renewal of the existing state of affairs" (p. 196). In contrast, Horkheimer saw critical theory as emphasising the importance of the reflexive thinking required to acknowledge that knowledge in itself is ideologically shaped and consequently influenced by social, cultural and historical conditions. Horkheimer's identification of these differing types of theory has practical implications for therapeutic practice (Fox, Prilleltensky, & Austin, 2009; Hook, 2004; Prilleltensky & Nelson, 2002) and community practice (Borden, 2010; Hughes, Jewson & Unwin, 2007; Napier & Fook, 2000) that raise questions about the concept of a one-size-fits-all approach to working in community. In making sense of experience and determining the best courses of action in living, our context-specific knowledges are constantly being tested and updated so that our theories of living are reflexively critiqued to see how they fit the particulars of our present social, historical and cultural settings. As no theory can be deemed universal, therapeutic and learning practices require a collaborative approach in order to discern the specifics of each individual's or group's current context informed by their own relationships, histories, beliefs, values and intentions.

Anthropologist, Geertz (1983/2000) spoke of "experience-near" and "experience-distant" expressions of life's events, terms he took from psychoanalyst, Heinz Kohut. Geertz describes them thus:

> "An experience-near concept is, roughly, one that someone––a patient, a subject, in our case an informant—might himself naturally and effortlessly use to define what he or his fellows see, feel, think, imagine, and so on, and which he would readily understand when similarly applied to others. An experience-distant concept is one that specialists of one sort or another—an analyst, an experimenter, an ethnographer, even a priest or an ideologist—employ to forward their scientific, philosophical, or practical aims" (p.57).

Acknowledging the centrality of experience-near local knowledge to meaning-making has implications beyond anthropology. It offers social support workers a significant key to making their interactions with clients and communities directly relevant and sensible to specific contexts. Clever Connections was thus conceived to be jointly planned with care givers based on their own understandings of what connections with their children meant to them.

Applied Linguistics

When Wittgenstein (1921/2012), stated, "The limits of my language mean the limits of my world" (loc. 5.6) he expressed the idea that making meaning of lived experience requires the use of words. If we don't have a vocabulary for a realm of our experience, we cannot comprehend it. If we have only a limited vocabulary for a particular sphere of existence, our ability to make sense of what happens within that sphere is limited. Vygotsky (1934/1986) noted that, "Real concepts are impossible without words, and thinking in concepts does not exist beyond verbal thinking. That is why the central moment in concept formation, and its generative cause, is a specific use of words as functional 'tools'" (p.107). To structure our understandings of our "worlds" and our places in them, then, we conceptualise within our individual and shared linguistic constraints.

Applying this understanding to the matter of attunement invites investigations into not only *noticing* states in ourselves and others but to also *naming* them. Lieberman (2011) points out that neuroscience now provides neurological data on why this is helpful: "Putting feelings into words activates a region of the brain that is capable of inhibiting various aspects of immediate experience, including affective distress" (p. 203). He says that research shows us that, "When individuals are asked to process affect labels while looking at negative emotional images, the amygdala response either disappears or is significantly attenuated" (p. 202). This information can be applied to assist children develop their self-regulation through reflective linguistic strategies. Siegel and Payne Bryson (2012) apply this knowledge in a strategy they call, "Name it to tame it.. .. The right side of our brain processes our emotions and autobiographical memories, but our left side is what makes sense of these feelings and recollections. Healing from a difficult experience emerges when the left side works with the right to tell our life stories" (Ch. 2). Consideration, then, can be given to providing opportunities to collaboratively build and experiment with context-specific vocabularies to practice making meaning of lived experience. Attuned attention to, and labelling of, experience enhances reflexive and collaborative meaning-making, a practice that has people "on the same page" about what they have experienced. In planning Clever Connections, it was anticipated that opportunities for collaborative languaging of experience would assist in regulation processes.

Sensorimotor Practices

The aspects of the neural system that attend to internal sensation, perception of the external the senses and awareness of the body's positioning in, and movement through, space are referred to as sensorimotor. When there is good neural integration, information from these varied sources is readily relayed to the prefrontal cortex to assist with decision making about best actions to be taken in any given situation. Paediatric occupational therapist, Sher (2009, Ch.1), indicates that sensorimotor difficulties influence most aspects of child development, including social, regulatory and planning abilities. These abilities develop in relation to the quality of social attunement between carer and infant, which Ogden, Minton and Pain (2006) remind us require "the caregiver's consistent and accurate attunement and response to the infant's body through their reciprocal sensorimotor interactions" (pp. 42–43) in order to develop efficiently. A carer's ability to empathise and match their physical and emotional state to their child's through nonverbal engagement enables her/him to then calm their child. "Consistent and accurate attunement to the infant's body through reciprocal sensorimotor interactions" (Ogden et al., 2006, p. 43) is the basis of the developing carer-child relationship. By constant repetition of this positive reciprocal attunement, the infant internalises a "template" of safe social connection, which provides the required environment for the development of important neural functions, such as physical and emotional self-regulation and the abilities to predict, organise and respond to their social and physical worlds.

The significance of positive and effective *neural collaborativity* is not restricted to infancy but continues to play out across the human lifespan. As noted by Lopes, Salovey, Côté, Beers and Petty (2005), ability to regulate emotions appears related to aspects of positive social connection. The work of Henricson, Berglund, Määttä, Ekman and Segesten (2008) suggests that tactile touch may help modulate the sympathetic nervous systems of the critically ill. Migliore's work (1993) shows how metaphoric language can reflect an understanding of interneural regulation and consequent expectations for communal assistance in helping to settle someone's neural system. He explains the social function of

an old *racalmutese* (Racalmuto Sicilian) metaphoric phrase *triemu comu un busciarieddu*. This expression means to tremble like a bunch of cut green grain that is held over coals and turned. The grain's trembling indicates to the holder that it is cooked and will burn if left over the heat any longer. The metaphor is used socially to point out to others a nervous trembling state. The purpose is to encourage others to help by taking away the 'heat' of the situation that is causing the trembling, before damage is done. This metaphor underscores the existence and function of our shared neural networks.

It seems appropriate then to consider that collaborative sensorimotor activities could provide attuned experiences of the kind that can enhance a range of developmental aspects for children and help attune participants to each other's states and to their regulation.

Mindful Practices

Mindfulness is a term used to describe a state of detached awareness in the here-and-now. This can involve attunement to the physical environment through the senses, internal physical sensations of the body's various systems, emotional responses, the verbal and nonverbal communications of others, as well as one's thought processes. Quite simply, it might be thought of as the ability to *notice and name* what is going on in a reflective, rather than reactive, manner. The naming aspect requires the use of language, which engages meaning-making. Siegel (2007) indicates that mindful awareness improves "the capacity to regulate emotion, to combat emotional dysfunction, to improve patterns of thinking, and to reduce negative mindsets" (p. 5). Siegel (2012) also points out that there is an overlap between practical outcomes of mindfulness and secure parent-child attachment with the integrative functions of the middle prefrontal cortex (p. 42).

Brown, Ryan and Cresswell (2007) indicate that a range of studies suggest "Mindfulness is associated with enhanced executive functioning, better self-regulation, greater autonomy, and enhanced relationship capacities" (p. 227). Attachment security and emotional regulation abilities have been confirmed by the work of Goodall, Trejnowska and Darling (2012) to be related to dispositional mindfulness. Research into mindfulness interventions shows positive results for children with developmental disabilities and their parents (Singh et al., 2007) and adolescents diagnosed with autism spectrum disorders and their parents (de Bruin, Blom, Smit, van Steensel, & Bögels, 2014).

It would appear then that activities that engage mindfulness are in some way related to quality of attachment and both are connected to outcomes in a range of neural developments. Opportunities to collaboratively experience attunement to both body and limbic states (sensing in), external environment through the senses (sensing out) and socially (sensing each other) are likely to benefit relationship developmental qualities.

Narrative Practice

Ordering our understanding of experience to make sense of it, as Siegel has pointed out, requires the process of storying, a concept that underpins narrative practice (White, 2007; White & Epston, 1990). Narrative practice, however, also pays attention to the power to choose which experiences are attended to, recalled and situated within a plotline that makes sense of what has happened. As White (White & Epston, 1990) points out, stories not only shape our understanding of what has already happened, but they are also "constitutive or shaping of [people's] lives and relationships" (p. 12). Carey (1999) has also noted that "From the smallest of shared experiences can be woven powerful counterplots and alternative stories" (p.120). White often reminded us that our lives are multi-storied and that having the power to choose our own preferred stories situates our identities within our lived experience rather than under the agendas of the dominant discourses of cultural institutions and power structures. Opportunities for people to reflect on and bring forth accounts that matter to them regarding their hopes, dreams and preferred identity conclusions provide a rich feast of possibilities for enhancing what is valued in relationships. This seemed to me an important process to include in the structuring of Clever Connections because maintaining what people see as important in their lives shapes their actions.

Communal Practice

In considering how human development springs from participation in sociocultural activities within community, Rogoff (2003) points out that, "people develop as they participate in and contribute to cultural activities that themselves develop with the involvement of people in successive generations" (p. 52). Cultural practices, then, are mutually constituted. In order to gain a storied and thus a reputed existence, new, rare or lost actions and interactions – and thus identities – require the opportunity to be experimented with, and engaged in, within the presence of witnessing others (Myerhoff, 1986). Playing at preferred ways of being requires the presence of collaborators who notice and name what we are up to. Schechner (1982) described the usefulness of "restored behaviour" (p. 39), actions that are rearrangeable, reconstructible and independent of causation, "originating as a process, used in the process of rehearsal to make a new process—a performance". As there can be no performance without an audience, communal practice is required to embed new ways of being and that is best achieved if the audience involves those with whom we can continue to make those new and preferred rehearsable performances. There is an attunement to intention implied in creating successful collaborative action.

In reporting on the efficacy of communal gatherings with mothers and children affected by domestic violence, Carey (1999) indicates that, "in our experience, we have found that it is mothers, not professionals, who can provide the

best support for children who are coming to terms with the effects of violence on their lives. The context of a gathering for mothers and their children seems to offer the potential for reclaiming their relationships" (p. 112). Further, Carey notes that in this context it was possible for a mother to learn, "to trust that the positive experiences that she sometimes has with her children. .. are not 'just a fluke', but something she and her children make happen together" (p. 119).

Providing the space and time for families to play through collaborative and exploratory experiences, in the company of others, was an intention I held in planning the Clever Connections pilot programme. To be able to trust that positive experiences are something families can create together, rather than treating the exercise of improving attunement as only passing on expert theory for carers to take home and "do" to their children, seemed an important aspect for which to plan.

Development of Guiding Principles for Planning the Clever Connections Pilot Programme

By taking into account the influences of critical theories, applied linguistics, as well as sensorimotor, mindful, narrative and communal practices, planning opportunities for carers and their children to play with and collaboratively experience aspects of attunement, the following guiding principles were then formulated.

1. *Take note of the specifics of a group's experiences and preferences in choosing the content of what is offered.*
   Applying critical theories to the planning of the Clever Connections pilot programme required looking at the specificities of the cultural, historical and social aspects of the specific participants' lives. This involved tailoring the programme by paying attention to individual and collective values and preferences rather than using a traditional universalised one-size fits all approach devised according to current expert knowledge. This was done by engaging the adults in shaping the topics to be covered within the programme and maintaining flexibility with structure over the course of the programme.
2. *Provide opportunities to reflect on the experience of activities and provide some sample vocabulary menus for experimenting with language.*
   By applying ideas from the field of linguistics to an understanding of neural development, a shared exploratory languaging of the experiences was encouraged in the Clever Connections pilot programme. The sessions were structured with opportunities at the beginning and end of the sessions and between activities to talk as a whole-group about what happened in the activities. Activity cards were designed to encourage extension of sensory and emotional literacies. The planning of the Clever Connections pilot programme incorporated activities, which would engage dyadic and group languaging of events and experiences during sessions with the intention of integrating left-brain processing of experience with right-brain meaning-making within a shared context.
3. *Create open-ended collaborative experiences inviting sensory curiosity and discernment.*
   By paying attention to the significance of sensory attunement to relational and neural developmental outcomes, experimental activities were devised to communally discover and compare each other's sensory preferences. In this way, the Clever Connections pilot programme attended to an often-overlooked aspect of attunement.
4. *Use shared mindfulness to generate understanding in the here-and-now of each other's experiencing.*
   Invitations to notice, name and share aspects of experience were built into the Clever Connections pilot programme through activities using *sensing in* (interoception), *sensing out* (perception), *sensing each other* (interpersonal-oception) and *making sense together* (collaborative meaning-making).
5. *Hold with an awareness that making meaning of experience is informed by people's own skills and experiences.*
   In attending to the understandings of identity formation suggested by narrative practice, and the repercussion for future possibilities for identity claims, space was given in the programme to the expression of what was deemed important by participants and for recognising existing skills and knowledge. Activities were planned around the group's preferences and abilities and the structure was kept fluid, within the decided collaboratively planned framework, to attend to the meaning made by participants of the experiences of the planned activities, as they occurred.
6. *Experiences directed by people themselves rather than by so-called "experts" are more likely to be understood as repeatable and part of their potential repertoire.*
   In considering the wisdoms of communal practices and the ways in which culture grows from participation, I attempted to limit the instructional aspects of activities and to set up open-ended experiences that invited experimental collaborations. In this way I hoped to offer shared experiences that could be readily repeatable in other contexts.

Running the Clever Connections Programme

Eliciting Participants

This pilot programme was advertised as a free event for families with primary school-aged children, living in the Inner West area of Sydney. Invitations to register were disseminated via local school newsletters and also through the *Parenting Resources* website. Five families enrolled with one withdrawing shortly before the first session. Enrolment included giving permission for using feedback to shape further work with the project and when feedback was sought the intention to include the overall results in a presentation

paper was made clear. In seeking follow-up feedback after six months, the intention to publish the results was stated and specific permission was sought to quote in full the feedback of one participant. Each of the four families attending consisted of professional working parents and their children. The composition of the group changed a little each week, depending on family-member availability. Generally, the group consisted of five adults, and five children aged between four and eight years. At one session, a three-year old family member also joined us. The family groups ranged from one adult and one child through to three adults and two children.

Structure of the Programme

The Clever Connections programme was run over four sessions in a small local hall. Session One was a three-hour "adults-only" event held on a Thursday evening. Sessions Two, Three and Four were whole-family events run on consecutive Thursday evenings. These sessions ran for one and a half hours each. There was a two-week break between Session One and Session Two. E-mail contact was made with participants between sessions to provide follow-up notes and to respond to queries or concerns arising between sessions.

Each session was planned to begin with a physical activity, followed by a thoughtful activity and ending in a relaxing activity. This was done in order to assist settled regulation at the end of the session when parents had the task of making the transition with their children to home. Sessions were planned to begin and end with a shared conversation at the "meeting space", a circle of cushions and blankets in the centre of the hall. Opportunities to collaboratively discuss the effects of the activities were also scheduled between the different activities during the evening to facilitate languaging of experience in a shared way.

Session One: identifying what is important and collaboratively building the programme (adults only) A significant intention for this first session was to connect and collaboratively identify a shared sense of purpose for the course of the programme. This initial session consisted of four activities, with a meal provided between the second and third activity. The meal was supplied to facilitate social connection and support working parents with busy schedules.

After we had considered how to take care of each other in sessions and attend to confidentiality, the first activity involved participants interviewing each other using the starter question, "Name three things you would notice when there is a good connection between a carer and their child". Participants then rated how they believed these aspects of connection were going for them with each of their children. This information was then shared with the whole group to help shape and share ideas about the meanings made of the concept of good connections. It also informed the structure of the next activities. The results of this collaboration provided feedback to me about content that was the best fit for this particular group.

The group identified a number of indicators they believed demonstrated good connections between carers and children. These included verbal, negotiative, neural regulative and social engagement-related factors. In terms of verbal exchanges, participants cited "verbal rapport", "child is forthcoming with information and stories" and "an ability to talk through things" as signs of good connections. A sense of mutual working through of difficulties was expressed through ideas, such as "a sense of give and take", "flexibility", "both parties feeling heard" and "aligned motivations and priorities". Ability to work through difficulties was expressed as, "capacity to reconnect after conflict", "negotiation to resolve conflict", "presence of reciprocity", "alignment", and "child's capacity to accept decision from parent". In terms of evidence relating to level of neural arousal, participants mentioned, "guard is down", "energetic ease and nonverbal comfort", "not acting out", "flow", "engagement". Social engagement was suggested in comments such as: "wanting to be engaged in games and activities", "anticipation of interests", "obvious delight in each other's company", "physical affection [and] gentle, calmer and more honest contact", "a sense of familiarity" and "positive facial expressions". By making the time and space to collaboratively define good connections this group's specific local knowledge was honoured and a mutually agreed framework was instituted for the following sessions.

A menu of possibilities for how we might use the rest of the evening was then supplied to the participants and they decided on the structure of the remaining time in Session 1. This menu consisted of the following possible topics in relation to the growing up their children:

- holding on to what's precious;
- managing pressures and expectations;
- understanding neural development;
- regulating nervous systems;
- appreciating sensory differences;
- building ethical judgment;
- growing emotional literacy.

Through discussion and negotiation, the group chose the following two topics: *holding on to what's precious* and *understanding neural development* as their preferred content for the rest of the evening.

In considering what the group members held precious in growing up their children, the following questions were provided for discussion:

- What are the hopes for our children?
- What intentions do we hold in caring for them?
- What values guide our actions in their care?
- What helps support that which is held precious and helps us to act in accordance with it?

The following responses were recorded, collated and shared by e-mail prior to the second session:

In response to the ideas of their hopes for their children, the participants arrived at the following:-

- to form deep sense of connection with them, to stand our relationships in good stead;
- when children start to spread their wings;
- to maintain that spark of connection;
- to hold an openness with us in sharing through conversation;
- to hold onto the sense of what inspires;
- to retain a sense of humour;
- to enjoy a sense of achievement;
- to be able to realise their potential;
- to develop an understanding of how rules can be context-specific.

In response to the ideas of their intentions towards their children, the participants arrived at the following:-

- to set an example by following through;
- to help our children to develop independence and strength by introducing challenges;
- to inspire trust by maintaining open conversations;
- to be calmer in ourselves by connecting and calming self;
- to hold onto a sense of fun by continuing to play games.

In consideration of the values guiding their actions with their children, the participants arrived at the following:-

- maintaining the importance of social connections;
- respecting children and how they come to be, their views, and for that respect to be reciprocal;
- respecting others, the planet and diversity;
- holding with a position of social justice;
- holding with self-determination (not being beaten down);
- maintaining emotional resilience.

In relation to the ideas about what supports that which they hold precious, concerning their relationship with their children, the participants arrived at the following:-

- sharing values with partner and thinking along the same lines;
- taking time to nurture values;
- having experience provides knowledge and skills;
- sharing values in community prevents a sense of isolation;
- sharing a sense of creative alignment with partner;
- maintaining a sense of humour and humility;
- playing (brings out the best);
- maintaining a sense of oneself through the independence of doing one's own thing.

In making the time and space to collaboratively articulate, share and explore hopes, intentions, values and relationships, it was intended that the specifics of this group's local knowledge about, and culture of, connecting with their children were acknowledged and honoured, providing witness to their preferences and ways.

To consider information about neural development in relation to their own children, the group was then provided with a large floor timeline on which they plotted the age of each of their children. They were then given a set of information cards, each of which gave an overview of a particular neural structure, its functions and its understood period of development. Together, the participants assembled a neuro-developmental timeline related to their own children. This activity was designed to assist recognition of the neural functioning of their children and to raise awareness of those areas of functioning that children were still developing, as well as those areas already likely to be "online". It was anticipated that this activity would assist conscious connections with their children which predicted the contexts in which they still required assistance, particularly in terms of self-regulation, planning, problem-solving and social engagement, as well as areas in which more independence could be expected and supported.

Finally, a discussion was held regarding which topics the adults preferred for the structure of the three whole-family sessions, based on the same menu of topics used in structuring Session One's content. The group chose the topics: *regulating nervous systems*, *appreciating sensory differences* and *growing emotional literacy*. These choices then framed the content of the whole-family sessions that followed.

Session Two: regulating nervous systems (whole family) The second session was designed to provide both information and experiential opportunities in maintaining and regaining sound emotional and physical regulation. It involved physical games designed to help notice and name internal physical experiences. These related to stressed/relaxed states, paying attention to muscle tension/relaxation, effects of spinal posture, facial expressions, body movement and vocal prosody. An activity using animal metaphors for the prefrontal cortex region (*owl-brain*) and the amygdala (*meercat brain*) then followed, in which the noticing and naming exercises were used to identify *owl-brain* and *meercat-brain* states in action.

During the evening, we also developed in-situ a game in which one participant would role-play a tantrum whilst another participant would approach and, with a calm body and gentle voice, practice saying, "I can see you seem upset right now". We would then discuss the effects for both participants in the role-play. The evening finished with a guided meditation, which involved low lighting and

participants lying quietly whilst a storyline inviting an imagined meeting with an animal-guide introducing participants to a "safe place".

Session Three: appreciating sensory differences (whole family) In order to assist with tuning in together to explore the external world, this session consisted of a sensory carnival, in which zones for the senses had been set up. These zones – ear, tongue/nose, eye, skin, and body – consisted of a set of explorative activities in which carers and their children could experiment with their senses in playful ways. The activities provided opportunities to find out together about each person's sensory preferences. Contextualising stories for each sensory zone provided introductions to the activities, which involved both sensing and naming experiences, thus continuing left/right hemisphere integration practice. They also involved the presentation of sensory vocabularies to stimulate identifying and naming of sensory experience. For example, the tongue/nose storyline read:

> Dr Nita Sonberg from the Stockholm Institute of Pongs and Licks has a problem. She is supposed to be developing some new perfumes for a French company and some new dips for a Spanish deli. But she has got all her samples mixed up and she needs your help to sort them out! The smells are in the coloured jars (be careful not to let them escape!).
>
> The tastes are in the spray bottles (you can taste-test a bit on a spoon – take care as some might be strong!).
>
> **Some words for tastes and smells**
>
> Salty Tangy Hot Sweet Bitter Pungent Yummy Yucky
>
> Can you think of some more?

Participants were checked regarding any possible sensitivities prior to exposure to the tongue/nose zone to avoid any unwanted reactions. Initially, a 10-minute time-frame was set for groups to try out a particular sensory zone and then groups were encouraged to swap and try another. After several rotations, the participants were left to experiment in zones and time-frames that fitted for them. The evening ended with another guided meditation.

Session Four: growing emotional literacy (whole family) Four activities were planned for this session. The first was a collaborative drumming activity using kitchen implements. The second was a game of musical faces. The third involved noticing and naming one's own emotional state. The final activity was another guided meditation.

Collaborative drumming requires participants to pay full attention to each other, watching their movements and listening in order to mirror the rhythm produced. It is a high-level social cooperation activity suitable to heightening group attunement. Synchronised drumming has been identifed as associated with feeling good and increasing prosocial behaviour, provided the drummers find rhythms easy to make (Kokal, Engel, Kirschner, & Keysers, 2011). We used call-and-response to engage in a variety of simple rhythms which brought the participants into a collaborative neural pattern.

Musical faces involved engaging in discussion about what a pictured facial expression might be called and then collaboratively surmising the context in which the expressor might find themselves with this facial response. The participants began by circling the room whilst music played. Around the floor twenty A4 images of differing facial expressions were laid out. When the music stopped, the participants would stop and pick up the image closest to them. Carers and their children then discussed the expression and its possible context. To assist, each card had some contextualising information on the back, such as "I feel angry when something unfair has happened". Participants were then ecouraged to consider the posture, movement, gestures and other expressions that would be likely to accompany the facial expression in this context. In this way, emotional expression was identified, articulated, contextualised and recognised as involving many nonverbal components of communication.

The third activity planned for this session was an opportunity to choose words to help describe and share current feeling states. In consultation with participants, this activity was not carried out in the pilot programme due to the level of fatigue evident in the group on this particular evening. Similarly, the planned guided meditation was shelved for that evening.

Evaluation and Follow-up

Feedback was sought from the families via e-mail following the final session. Respondents indicated that the adults-only session reinforced important aspects of their own current reading on parenting issues. The programme's activities related to relaxation continued to be used at home by one of the families. Another respondent believed that acting out the tantrums and having their children take turns to "take the adult role" (notice and name out loud the state they observed) seemed to inspire greater empathy in their children. One parent reported that her children had so much enjoyed the neural regulation activities built around the metaphors of the owl and the meercat that they had turned it into a game at school.

Feedback was very positive regarding the number of sessions. Four sessions, respondents suggested, was just enough. The weekday evening timeslot was generally felt to be problematic, with a Saturday morning being suggested as a preferred time. From my own perspective, it was exciting to experiment with families to see what fitted for them. Providing a general framework and creating the details based on the local knowledge and preferences of participants provided the flexibility to adapt and change as we worked together. The final session had taken place very near to the end of the winter school term and everyone had arrived clearly tired and unsettled, which led to the decision to "listen to our bodies and call it an early night"! While the

drumming activity in this session was helpful for engaging social attunement, it was also very energising, which was not a good direction in which to move a group of tired children! I had also failed to have a contingency plan to assist anyone for whom holding rhythm was difficult, an important oversight as sound rhythm is key to the sense of connection (Kokal, Engel, Kirschmer, & Keysers, 2011).

As an observer of the interactions between carers and children during this pilot programme, there were some beautiful moments that spoke volumes about the value of creating a time and space for collaborative non-goal-oriented activities. There is not the space to reveal them all here so some of my favourites will have to suffice. The enthusiasm with which owl-brains and meercat brains could be experimented with, sensed in the self and noticed in others, suggested that participants were curious and engaged in noticing and naming these states and seemed eager to share their experiences with others. Watching one child experiment with brushing her mother's belly with a feather in the Skin Zone of the Sensory Carnival, I could see the joint focus and wonder in the experiencing and the describing shared between the two. The exhiliaration many children expressed at being given the opportunity to role-play an adult and experiment with caring and open language towards their tantrumming parent-as-child surprised me. The children asked many times over to play this game. When one child took a turn as the tantrummer, she reported she felt calmer in hearing the acknowledgement of her state.

Follow-up at six months by e-mail was made, asking just one question, "Is there anything from the programme that remains useful for you and your family"? Two of the four families chose to reply, both indicating that the sensorimotor and regulation strategies explored in the programme continued to be utilised at home. One respondent summed it up thus:

> *Probably what has remained most useful for us was the introduction to/consolidation of ways of thinking about children's brains as moving through different states of alertness: the metaphors of the owl and the meerkat. Clever Connections helped consolidate some of the OT/sensory-model thinking about states of being (e.g. sensory defensiveness) and in ways that seem more holistic and somatic than those typically offered by conventional psychology.*

The take-home message from this pilot programme is that carer/child attunement appears to be enhanced when the time and space is provided to share in activities which are meaningful and relevant to participants' lives and values. As shared experiences inform shared knowledges, practices and intentions, the opportunity to talk about what happened in the activities suggests that adding languaging tasks to sensorimotor and regulatory activities can aide integration and making sense of experience.

A number of issues arose in the running of the programme. In planning Clever Connections one consideration I had not made was in relation to negotiating and developing agreed protocols for what to do in situations where distress or disinterest arose. This meant I sometimes stood back and sometimes engaged with participants in the occasional moments when attunement was lost. In considering future running of this programme, I would include this issue in the initial discussions during the adults-only Session One and also in the Meeting Circle time. It would then be possible to negotiate taking into consideration what each member preferred and developed an agreed protocol that would be clear for everyone in what was acceptable and in what situations support from other members of the group or myself would be welcome. Another issue arose as I found myself catering to a younger cohort of children than I had imagined when I advertised the programme for primary-school aged children. The ages of the children attending ranged from four to eight years (and three to eight years one evening), which made the weekday evening sessions too late for families and it was clear both the working parents and their children, while highly engaged, were also tired. Saturday mornings would be a much better time for running Clever Connections in terms of supporting the wellbeing of all family members. I imagine that the drumming activity, in particular, would be much better suited to that time-slot!

One of the unanticipated effects of devising and trialling Clever Connections has been the influence it has had on my clinical work with mothers and their children impacted by domestic violence and other traumas. The attunement strategies devised of shared sensing in, sensing out and sensing each other have migrated into this work, sharpening my own clinical awareness of how trauma disrupts the "weness" in these relationships and bringing a greater explicit engagement with both carers and children in noticing and naming these important connections.

It is clear from the observed responses and formal feedback that opportunities to collectively share in the open-ended exploration of sensing in, sensing out and sensing each other provided openings for good carer-child attunement. This is quite different from the goal-oriented tasking of so much of modern family life. How else might these collaborative practices be further encouraged in our overly busy, mediated culture to inspire more time for open, curious and exploratory activities between carers and their children? How different would the collaboratively planned sessions of the programmes look with different cohorts setting forth their own values, preferences and local knowledge? I hope that other practitioners can find something to use in what I have put forward here in sharing my experience of developing and piloting the Clever Connections pilot programme. I would like to thank all the participants of the Clever Connections pilot project for their generosity in sharing their intentions for family life and the collective wisdoms that have been instrumental in shaping the programme. I thank them also for taking time to provide valuable feedback on their experiences.

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