## **Foreword**

## Support from Greek researchers for a Science of Human Nature alive in relationships, from birth

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The invitation from Theano Kokkinaki for an introduction to a celebration of work in Greece on the developmental psychology of infants gives me great pleasure. I was asked to recall studies that have, since the 1970s, changed scientific appreciation of infants' self-aware cleverness and their powers for sharing their interests playfully. I was also asked to respond to the articles for the Journal. All the contributors work together to keep alive this natural science view of what being human is like for us before we are able to talk about it.

If we are well and in good spirits we know we were born with our own consciousness, and that we have always been seeking companionship from persons we trust. All we remember comes about in a wakeful imagination for an active and creative life, guided by interests and feelings that make common sense. Our self-awareness has grown as a story of companionship with people for whom we have special affection.

And yet experts in philosophy and psychology have laboured for centuries to persuade us with intricate and rather anxious reasoning that we were not conscious as infants. That we had no sense of self and could only make mindless reflex actions in response to stimuli related to comfort and satisfaction of organic needs, or of defense or withdrawal to protect the body from pain. They argue we have to learn to move with a persistent and imaginative self-awareness in relation to the outside world, and that we become aware as individual egos,

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reacting mindlessly to other persons as objects that engage our rudimentary feelings of pleasure or pain. True consciousness is identified with an ability to represent or describe the facts that, over the years, shape, locate and validate what we think we perceive, ordering them with rules of reasoning, and with conventional symbols that make it possible to identify our personal experiences of facts with those perceived by others. Our movements take years to become coherent and effective, only show coherent imagination after we become free of parental holding and gain mastery of independent locomotion. A toddler is an apprentice who needs to be taught what to do and what is true. After a few years they can sit still in school and learn their lessons (Trevarthen and Bjørkvold, 2016, in press).

This prejudice against a natural human vitality of mind with self-conscious and sympathetic awareness in good company has been challenged repeatedly by optimistic and accurate attention to how happy infants express themselves with discrimination for imaginative goals in the time of their actions. How they seek engagement skillfully and sympathetically with the intentions and feelings of other adult human beings. They show what a Scottish biologist and theologist David Hay, of the Religious Experience Research Unit at Oxford, identified as 'relational consciousness', the natural foundation of our spirit for a communal life (Hay, 2006; Hay with Nye, 2006). Most importantly, the expressions of affection shown by a newborn prove to be adapted, not only to obtain bodily comfort for the self, but to support playful and joyful communication in joint activity with intelligent purposes and interests. In projects with brave teachers and colleagues, who have become lifelong friends, I have benefitted from the fellowship of this adventure in discovery of innate psychodynamics for cultural life.

One of my professors Jerome Bruner (1990, 2003) says we are, by nature, "story-making creatures". I am happy to help Theano Kokkinaki record a story of a science of infancy flourishing in Greece, which has led to this remarkable collection of papers.

Briefly, my own scientific story is that, after learning about purpose for life in plants and animals as a schoolboy in New Zealand I studied ecology, which records how wild animals and plants live and evolve as intricately cooperative assemblies. This making of community is recorded in the famous last paragraph of Darwin's "Origin of Species", which describes his pleasure to contemplate the community of life. He is delighted to know, "a tangled bank, clothed with many plants of many kinds, with birds singing on the bushes, with various insects flitting about, and with worms crawling through the damp earth, and to reflect that these elaborately constructed forms, so different from each other, and dependent upon each other in so complex a manner, have all been produced by laws acting around us." (Darwin, 1859, last page). I became interested in the growing science of ethology, also inspired by Darwin with his studies of the nature and functions of emotional expressions (Darwin, 1872). This led, with the advice of a professor of physiology, to doctoral research in the US with Roger Sperry, to explore how brains of monkeys and humans use eyes to guide clever movements of hands, and how skills and discoveries of practical purposes are generated and regulated differently in our left and right cerebral hemispheres, while being guided and evaluated by the united regulations of motives and emotions in the brain stem. All my studies of anatomy, growth and behaviour strengthened belief in the existence of a primary self-awareness that moves any plant or animal 'imaginatively' as an organism anticipating a life-world, as I was learning about it with multiplying interests and recollections.

Fifty years ago, I became a father, and wanted to understand how my infant son knew his mother and me so well in intimate games with interests and feelings, giving us joy. By a miracle I was asked when our baby was two years old if I would like to join a research project in Bruner's laboratory at Harvard to use film to observe how infants communicate with their mothers. With the help of a neonatal paediatrician, Dr. T. Berry Brazelton, Bruner was taking his inspiring belief in the creativity of human learning, which had supported a new approach theory of education since the 1940s, to lead a new awareness of the clever sociability of young infants. Brazelton was collaborating with new parents to teach his fellow medics that a newborn infant is a person wanting to lead games in playful human company, not just a patient needing treatment (Brazelton, 1979).

In my paper for Theano I tell how discoveries with Bruner and Brazelton at Harvard in 1967 led to a plan to trace the story of how human common sense grows in infants' minds with intimate support from affectionate mothers and fathers, and with other family members or friends. Babies are definitely sociable story-sharing persons from the start, wanting to develop by learning conventional plots. They have much to tell us about the experience, and its rewards and potential disappointments.

An important chapter of my research story was made with colleagues in Greece, thanks principally to the generosity and creativity of Professor Giannis Kugiumutzakis. In 1991, with my wife Lee, I spent three very happy Spring months in Crete while I worked at the University in Rethymnon, following closely the discoveries Giannis was making of how newborn infants, even prematurely born ones, were interested to study strange offers of communication he made. They were carefully imitating single head, eye and mouth movements, and hand gestures, and watching for his reactions. Later I met Olga Maratos, a pioneering psychotherapist who had startled the world of infant psychology in 1973 with

presentation of her thesis research to her supervisor Jean Piaget in Geneva, proving, contrary to his theory, that newborns could imitate. Piaget graciously accepted that his theory had to be corrected. Olga's presentations of her findings the year before caused surprise at a meeting of the British Psychological Society, as reported by Vasudevi Reddy in "How Infant Know Minds" (Reddy, 2008, p. 46). The discoveries of Olga and Giannis, like the work of Daniel Stern discussed by Stathis Papastathopoulos, marks a turning point in the scientific view of the young infant as a person with sympathetic consciousness prepared to learn customs of understanding.

Giannis completed his PhD at Uppsala with Olga as his supervisor in 1985, extending the work on imitation, focussing on evidence that the baby's responses were intentional, discriminating and deliberately repeated for communication, as we have summarised together recently (Kugiumutzakis and Trevarthen, 2015). He is publishing this year, in Greek, a book on our collaboration (Kugiumutzakis, 2016, in press).

This Special Issue in the Scientific Journal of the Department of Psychology of the University of Crete advances our understanding. First with four penetrating reviews and explanations of evidence on pathways for development of human intelligence in normal healthy infants. Then four papers present accounts of sensitive descriptive research on disorders in early development, and how psychotherapy or special education may best help affected young children to a richer and happier life with parents and teachers. All authors underline the importance of awareness of what lives in the child's spirit for life, and how it needs convivial company. These are the two aspects of vitality which the Chilean biologist and cybernetician or social theorist Humberto Maturana, with his colleague Francisco Varela, has named 'autopoesis', self-making, and 'consensuality', the sharing purposes of life (Maturana and Varela, 1980).

Stathis Papastathopoulos reviews the revolutionary thinking of Daniel Stern, focusing on the subtle ways Stern has characterised 'intersubjectivity', 'affect attunement', 'vitality dynamics', and the like. Papastathopoulos asks if this is a philosophical confusion of thinking about the nature of self-awareness, or an appreciation of the natural wealth of manifestations of agile minds that build experiencewith the affections of others who have their own forms of vitality -- "in an analogic continuity of multiple strands of sensitization and relationality with and in the world". Papastathopoulos concludes that life with intersubjectivity is an exercise of attunements with affects and intentions of others, meeting and being with the directions of the actions by which they chose to tell their story, corresponding actively with their subjectivity. His clarification of the natural richness of life in intimate relations prepares us to learn from empirical studies of subjects in engagement, how they move in the present space and time, with sympathy for deliberate actions and changing emotions that must change the future for themselves and with others.

Zaira Papaligoura picks up on the contentious problem of how, and when, the consciousness of a human Selfor subject emerges. How it moves to separate or connect inner affective states with properties discoverablein external objects and other subjects. Is a separate agent an essential innate foundation for imaginative powers of the mind to know anything, and to have intersubjectivity with other selves? Or must it be built out of blind impulses that collect experiences into a representation of affordances of the world outside? To put it another way, is intersubjectivity an imaginative creation of a source of life in a human being who expects to meet company, or a memory of efforts to live in a present environment where other individuals are objects to be taken up. She questions the theory of innate intersubjectivity,makingreference the psychoanalytic theory of Bernard Golse, who sees early stages of a separate awarenessas transient and dependent on constructive support from the

phantasies of relation that guide other persons' efforts to connect. Perhaps we should conceive the making of the Self as a balancing act between auto-poesis and con-sensuality, both essential. With Stathis', Zaira's logic invites observations on the first efforts of the infant to do and know. The following papers give many answers, confirming the subtle sensitivities that build selves in relation.

Theano Kokkinaki reviews evidence of differences in the purposefulness and affective tone of male and female infants, and notes that the attentions babies direct to the identity and changing emotional states of other persons appear to be different very early. This is strong evidence that innate powers cause individuals to develop as different personalities, fitting them to live with complementary roles in creation of a family or community, helping make their special habits and skills thrive and trying to control conflicting purposes and loyalties. Sexes are different not only for reproduction and care of offspring. They approach the work of life in an imaginative community with different impulses and feelings. And motives and feelings transform life stories for a boy or a girl at different ages, both because they are developing new impulses, and because they are treated differently by others. Human beings have the most marked individual differences in appearance and voice of any animal species, matching the very large size of the societies in which they find their roles for life.

Marialena Semitekolou has studied life at home in the family where an infant is normally eager to share adventures with both mother and father, as Brazelton discovered was the case from birth. She looks at play in this triad, and in the dyads of the infant with mother and father separately. She compares triads in play with or without toys, and describes its special emotional richness or 'fun' when there are no toys. Once again careful and respectful description of what the young human being loves to do proves that it is alive for making a group awareness in intimate relations, where the actions of different others are compared, and

provoked. She builds on work of Vasudevi Reddy to cast light on the sense of humour that flourishes in the second six months of the first year, and brings joy to tricky negotiations in playful episodes that have regulated duration. With Theano, Marialena clarifies how the personality of an infant enlivens the experience of mother and father in personal ways, and how the narratives of play in a group bring special fun.

Despina Papoudi supports the idea that every young child diagnosed with autism has differed very early in their emotional engagement and playfulness, before they can be expected to master speech. She concludes that the difference recorded in play of children with autism when they are older is not a failure in cognitive representations of meaning or capacity to symbolise, as has been assumed, but a consequent emotional response to the initiatives and expressions of feeling in those who want to play with them and share meaning. She presents a thorough account of how normally developing infants rely on joyful inventiveness with known companions to develop their preverbal narratives, and that the games have narrative purpose to be shared before there are symbols. She concludes that the limited amount of research available supports the conclusion that there is confusion in how an infant developing autism uses imagination and emotional referencing in the first year, long before a standard diagnosis is possible. Affected children show differences in interpersonal awareness and imaginative playfulness before they begin to understand words. These primary disorders of imaginative intersubjectivity will have effects through later life, and not just in talking. This is in agreement with Leo Kanner's original view that autism is, "a biological disorder of affective contact".

Panormitsa Papakadolouka and Christina Papaeliou look at the disorder identified as Language Impairment which affects the expressiveness of speech (SLI-E). They compared boys and girls 4 to 6 years of age with this diagnosis with normally developing peers of

matching age. As with autistic children, the SLI-E children were less motivated for cooperative and pretend play, and their level of playfulness was not correlated with their severity of their language disorder. The conclusion is that the key feature of the disorder is an affective intersubjective, one which cannot be satisfactorily explained as a deficit in cognitive 'theory of mind'.

Kornilia Hatzinikolaou completes the trio of papers concerned with identification of psychopathologies of early childhood, presenting evidence that detailed developmental studies of emotional aspects of communication and building of relations have immediate application for treatment or therapy. She describes the theory and practice of Video Interaction Guidance as an approach that focuses on the expressiveness and responsiveness of all actions of the client or patient, and of the therapist or trainer, as revealed by sharing videos of practice. She proposes that advances in behavioural and brain sciences will benefit from this approach to visualising, understanding and treating impairments in self-confidence and affective relationships.

Jonathan Delafield-Butt and Jillian Adie apply ideas from developmental studies to interpret disorders of attention or self-control that affect a young child's progress in early education. They apply the concept of 'participatory sense making' to an analysis of shared narratives deliberately guided to help young children who are identified with Social Emotional and Behavioural Difficulties (SEBD), which prevent them making progress in school and require special pedagogy. They explain a theory of the development of narrative regulations in thinking and in learning of skills of performance and communication, and illustrate how this may be applied to analyse the work of teachers trained in the method of Nurture Guidance. Two cases show that when a teacher adapts their efforts to teach so they meet the initiatives of the child, this helps the child gain experience of how to participate in a

joint project and share pleasure in its completion. Clearly there are feelings of effort and discovery imagined through time that we have to recognize in one another at every level of collaborative work, from the proto-conversations and baby songs of early life to playing a competitive game according to its rules, and negotiating a path in movement.

I am sure that this work, brought to life by Theano Kokkinaki, will be a key source of reference in future studies of the ways we participate as story-making human beings from infancy, weaving together our subjectivities.

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