

A morphinum of theories*: Utilizing a mind-material-body lens to develop the young child

Retha van Niekerk

African Mathematics and Science Institute, South Africa

Abstract

The young child (0 to 8 years) is immersed in social settings; surrounded by parents, grandparents, siblings, caregivers, extended family, friends, medical practitioners, teachers that all have a fundamental impact on their wellbeing. We are currently experiencing a crisis in many countries regarding the overall support of the development and care of these young children. Traditionally in most countries health ministries prioritize child survival and physical well-being, education ministries focus on schooling, ministries of finance promote economic development, and ministries of welfare address breakdowns across multiple domains of function. In many countries, the professional development of the practitioners serving the young child through these different ministries, are trained, utilizing strict subject specific defined curricula, which do not reflect a transdisciplinary approach or understanding of the shared concepts between these different disciplines.

What is needed is shared theoretical frameworks, supported by explicit theories from the above mentioned different domains, that all serve the young child at all these points of interaction with the adult world. Furthermore, it is important that these morphed frameworks should reflect and embody the idea that social and physical environments that threaten human development (because of scarcity, stress, or instability) can lead to short-term physiologic and psychological adjustments. Although these are necessary for immediate survival and adaptation, it might come at a significant cost to long-term outcomes in learning, behaviour, health, and longevity. Vygotsky (1998) has argued that in general, Western psychology researchers' attention has traditionally been directed to a single observable criterion for measuring development, such as the behavioural aspects, or cognitive or medical aspects of a child.

When dealing with the bio-material lens, Malafouris (2010, 2009) emphasizes the fact that due to recent developments in brain and cognitive science, a neuroarcheology approach, underscored by Material Engagement Theory (MET) principles, aiming at linking brain and culture through material embodiment, time, and long-term change could assist in understanding complex emergent phenomena in the 21st century. In other words, the possibility of the emergence of different states of sense making by learners, based on the affordance at the point of interaction with materials, allows for differentiation that is dependent on the level of human sense making at a specific moment in time. An overarching umbrella that could assist in defining such a 'morphed' theory, allowing for differentiation on the one hand but also integration on the other hand, is the idea of identifying specific habits associated with each of the relevant domains (bio-material-psycho-social).

The aim of this paper is to share with the audience this multifocal bio-material-psycho-social lens, of how the utilization of a 'morphinum of theories', acknowledging the bio-material-psycho-social-world of the young child in the 21st century, can benefit not only professionals that work with young children but ultimately the parents of these young children. Regarding the psycho-social

development, many researchers (El'konikova & Grigoryev, 2017; El'koninova, 2017; Elkonin, 2005; Kudryavtsev, 2017) dealing with learners in the early years of development currently agree that the preferred pedagogy at preschool level should exhibit a predominant prevalence of a variety of forms of play. Porges (2017,2004) points to a concept that he calls neuroception (polyvagal theory) and emphasizes the fact that play in itself does not necessarily guarantee cognitive development, unless a specific condition, namely that of a sense of safety, is prevalent in the experiential world of young learners.

It is the opinion of the author that one of the better ways to address this crisis dealing with the young child's overall development and care, is to accept the challenge, background all professional elitist compartmentalized views and embrace a co-constructed, humble open stance towards the contributions that all of us can make together. This is not whimsy, but a call to taking action across not only subject domains but also paradigms!

*The author coined the term a 'morphinum of theories' (van Niekerk, 2019, p.1), to give credence to the dynamic nature in which a morphing of theories originating in different subject domains, but still relating to the same phenomena under investigation, can serve and contribute to better explicating emergent phenomena. This morphing of theories then leads to a newly unique meta-theory which utilizes and reflects relevant and specific aspects of the individual theories, while foregrounding theoretical aspects related to a specific event at a specific moment in time dealing with a specific phenomenon. It is a counter point to the idea of a continuum or merely hybridized theories or even integrated theories which are strung together in hierarchal fashions, in the sense that the attributes of the newly morphed theory are non-linear, non-static and ever evolving, guided by the demands of the dynamic nature of the multi focal 21st century teaching and learning contexts, linked to a unique event (contexts) that unfolds in real time.

Keywords: material engagement theory, mind-material-body, morphinum of theories, neuroarcheology, neuroception, polyvagal theory, young child



Author Biography: I started my working career as a protein- chemist researcher at Onderstepoort Veterinary Research Institute in South Africa (1981), after I had completed a BSc Hons degree in biochemistry at the North-West University. I eventually diverted into the education field by completing a BEd degree, finally culminating in a PhD with the focus on how young learners in their first year of schooling develop geometry skills. I was instrumental in co-developing the NCS - space and shape strand (geometry) of the mathematics curriculum for South African schools (2002) for Grades R to 9.