Dear Editor,

We are writing in response and in recognition of the article published in your June 2008 issue, “The Universe of Developmental Care,” by Gibbins, Hoath, Coughlin, Gibbins, and Franck. Our purpose in responding with this letter is 2-fold. Primarily we wish to applaud the authors for their difficult work in illustrating and beginning to conceptualize what has been for too long a nebulous collection of practices. In addition, it is our intent to articulate aspects of the proposed model that warrant clarification as it matures. In particular, we seek definitions and operationalization of the construct of a shared surface and discussion of the indication of the skin as a direct observation indicator of neurologic (and other functions) and, finally, offer some observations related to the use of a planetary metaphor.

Dr Gibbins and colleagues have accurately assessed the importance of a standardized approach to developmental care. We fully agree and are in appreciation of their work toward this aim. The continued absence of demonstrable linkages between developmental care and long-term neonatal outcomes is puzzling and disheartening. MacKendrick, in an editorial introducing an issue in the Journal of Pediatrics, relates this conundrum to our attempts at linear appraisal of a chaotic and dynamic neurologic system. Perhaps the Universe of Developmental Care (UDC) will help to drive the system toward optimal outcomes of the as yet unknown potentials.

The introduction of the construct of a “shared surface” between the infant and their environment is intriguing. It is truly plausible that the skin as an organ of sensation, metabolism, and thermal/physical properties by nature is exactly such an interdimensional surface. As a central premise to the UDC model, this will require extensive exploration in order to obtain clarity and ultimate agreement such that the model can be tested. While we appreciate this exploratory and avant-garde thinking, we are left with the following questions. Why is it necessary to “share” the surface in order to provide care that is responsive and contingent to the infant? Is this need different when providing care to older children or adults? This may lead to a more philosophic discussion, and to the consideration that systematic boundary determination is too simplistic. The admittedly complex constructs of love, caring, and healing come to mind, as examples of unbounded systematic psychophysiologic functions.

The direct observation of neural components is called out as a limitation of the Synactive Theory of Infant Development. We agree that it is difficult to accurately and reliably observe behaviors and determine physiologic function of the neural systems. The authors maintain that the UDC somehow makes this better. This is a point worthy of further clarification. Currently, we do not have direct measures of gastrointestinal maturation, cardiovascular compromise, or immune systems to guide our contingent care. As neonatal nurses, we must integrate information obtained from crude instrumentation, periodic laboratory measures, and indirect observations into our care in order to promote the health and function of all physiologic systems. It is clear that Dr Gibbins and colleagues are presenting a new way of thinking about the skin; however, it seems artificially simplistic to emphasize it for one aspect of biologic function, when all systems are interrelated.

The use of a planetary metaphor to organize the UDC model is commendable. It gives the reader a widely accepted example of interrelational components within a complex system. The graphical representation is pleasing to look at but may overshadow the work of the conceptual model, which is ultimately to provide a testable theory and model for prediction of outcome. The orbital influence of various practical care planets in the UDC model is representational of how care is delivered currently and, in some ways, highlights the separation of each aspect rather than the smooth integration that we assume the authors would promote in an optimized approach. The authors describe each aspect of the planetary system, refer to physical gravitational properties of the shared surface, and postulate that the infant will “exhibit a regular, predictable, and lawful development of observable behaviors in response to the environment.” There is as yet, still much work to be done to undeniably link these concepts together and provide a structure upon which to place the practical applications of neonatal care. While it is tempting to apply these concepts immediately, it seems premature to offer specifics such as those presented in Table 1.

We would like to close with our reiteration of appreciation to Dr Gibbins and colleagues for presenting their important work and to the staff of the Advances in Neonatal Care for making it possible to review, respond, and interact with it. We look
forward to further publications expanding upon the concepts of shared surface and universal representation of optimal care for neonates.

Sincerely,

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References