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Author

Deagon, Jay

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Augmenting Home Economists' Understandings of Cartesian Philosophy

Jay R. Deagon

Research Fellow, Griffith Institute for Educational Research, Brisbane, Australia

ABSTRACT

Home economics literature that references Cartesian philosophy often assumes a basic level of knowledge about René Descartes' work. To address this erroneous assumption, this paper seeks to shed light on the nuances of Descartes' philosophy in the hope that home economists may appreciate better how their thinking has been shaped over the past millennium. This paper provides an historical critique of Descartes' philosophy in relation to how he thought that human knowledge was possible. Aside from explaining several basic elements of his philosophy (especially dualism), this article celebrates Descartes' *method of doubt* as the foundational tool for scientific inquiry and critical self-reflection. However, the paper also asserts that this 'scientific' approach to home economics practice negates respect for the complexity of life, and for ways of knowing that are not informed by scientific knowing (including spirituality, wisdom, consciousness, and intuition). (*J ARAHE 21(4):131-140, 2014*)

KEY WORDS: Descartes, dualism, home economics, philosophy, method of doubt, scientific method

INTRODUCTION: IN PURSUIT OF UNDERSTANDING CARTESIAN PHILOSOPHY

Very few home economists have ever taken a 'philosophy' class (McGregor, 2012). Until commencement of a doctoral study, indeed, that was the case for this author. A recent study of spiritual discourses located within home economics literature revealed that Cartesian philosophy has deeply impacted home economics philosophy, ideology and practice; specifically, the ideas of dualism and scientific methods (Deagon, 2013). Inspired by Cartesian thinking, home economics evolved into a profession where technical, how-to, and scientific philosophy of practice is idealised (Brown, 1993). However, this 'scientific' approach to practice negates respect for the complexity of life, and for

ways of knowing that are not informed by scientific knowledge including spirituality, wisdom, and intuition (McGregor, 2011a; McGregor & Chesworth, 2005).

This paper aspires to shed some light on the nuances of Descartes' philosophy in the hope that home economists can appreciate more usefully how their thinking has been shaped over the past millennium. To achieve this aim, first, this article defines some foundational philosophy concepts, followed with some background as to where Cartesian philosophy fits within home economics literature. Then dualism (the mainstay of Cartesian philosophy) is introduced, followed with the main body of this article, which offers an historical and critical analysis of René Descartes' ideas about the processes involved to ontologically (reality) and epistemologically (knowledge) question how human knowledge is possible. The paper concludes with a discussion about the impact Descartes' seventeenth-century philosophy has had on twenty-first century home economics.

Foundational philosophy terms and concepts

Basic knowledge of philosophy may assist an individ-

Address for correspondence: Jay R. Deagon, Griffith Institute for Educational Research (GIER), Mt Gavatt Campus, Brisbane, Australia

Tel: +61-0402-119-711 · Fax: +61-07-373-56992

E-mail: j.deagon@griffith.edu.au

ual (home economist, teacher, or researcher) to know and state, perhaps with some level of confidence, their perceived 'place' in the world. McGregor (2012) explains that the purpose of philosophy in home economics is to provide a framework of rules, beliefs, values and principles that guide individual professionals, which, in turn, inform the services and practices of the profession. For this reason, foundational knowledge about ontology and epistemology is pertinent. Exploring concepts such as dualism, spirituality or consciousness requires people to be familiar with ontology and epistemology. *Ontology* asks questions about 'existence' and 'reality' - that is, it entails using formalised arguments of logic and reason to question what 'exists' and what is 'real'. Ontological questioning has an entwined relationship with epistemological questioning. Audi (1999) defines *epistemology* as the 'study of the nature of knowledge and justification'. Epistemology is a questioning of how we may know the 'truth' of our knowledge.

Just as Descartes struggled to gain knowledge of "the truth" of things and thoughts, each home economist will also have individualised ideas about the subject of 'truth'. Additionally, each region of the world will have a different way of interpreting truth and knowledge. Importantly, philosophers 'know' that because of the individualisation of thoughts, ideas and life experiences, these arguments may never reach a satisfactory conclusion, despite many attempts to do so. Notwithstanding definition and intellectual challenges, it is an interesting exercise (and experience) to critically self-examine what one believes philosophically. Examination of beliefs and philosophical perspectives is particularly pertinent when embarking on a research project to explore the concept of spirituality, consciousness, or wisdom.

Per the author's personal experience, critical self-inquiry necessitated an examination of the embedded sociocultural knowledges that impact on the researcher's perspectives. It was a multifaceted process that identified researcher influences and biases (Kincheloe, McLaren, & Steinberg, 2011) occurring in the context of a doctoral study that investigated cross-cultural views and perceptions of spirituality within home economics (Deagon, 2013). One focus of that investigation was broad historical influences on the directions of spiritual discourses. Spirituality and philosophy have a long interwoven history because they both seek answers to questions like "who am I", "what am I", and "what is my purpose"? A critical self-examination of core beliefs is required for an understanding of philosophy. For the reasons outlined above, this article shares an *expert novice's* (a

phrase coined by Pendergast, 2008) journey of philosophical discoveries, which resulted in locating connections between home economics philosophies and the philosophy of pre-enlightenment philosopher, René Descartes (1596–1650).

René Descartes was a French born mathematician, philosopher and metaphysician (Hatfield, 2008). Under a constant threat of heresy, Descartes influenced the Enlightenment period because his philosophy broke with tradition by recognising an individual's ability to think, question and challenge personal thoughts. Thus, Descartes is credited as one of the catalysts that brought about the doubting of 'truth' as was dictated by powerful authorities such as the church, royalty and the ruling classes (Garber, 1998, 2003). This paradigmatic shift in thinking revolutionised philosophy and European society, and in the late 19th century, it subtly influenced home economics thinking (Brown, 1993).

DESCARTES IN HOME ECONOMICS LITERATURE AND PRACTICE

Descartes is sometimes criticised within home economics literature because of the seemingly negative impacts that dualism, reductionism, scientism, and 'separations' have had on various perceptions of human beings (McGregor, 2011b). However, Garber (1998, 2003) points out that because of the Cartesian legacy, it is 'simply impossible to write philosophy without reacting in some way to Descartes' (see Garber 1998, 2003: *The Cartesian heritage*). As a result of the longevity of Cartesian thought, Descartes also impacted on the philosophical foundations of the home economics profession (McGregor, Pendergast, Seniuk, Eghan, & Engberg, 2008). Descartes' philosophy was central to the early development of 'scientific', 'mathematical' and 'mechanical' inquiry in westernised home economics (Vincenzi, 1981). Scientific practices (that is, the what and how of home economics) are vital components of home economics today—imagine bacteriology and hygiene without 'science'; workplace health and safety without quality assurance documentation and checklists; the methods used for constructing, testing and reproducing recipes; or the exactitude and mathematical precision required to sew a pattern. Each of these applied technical practices requires a 'scientific method' to record the process for replication. It was Descartes who provided the western world with what is thought to be the 'first' scientific method—an achievement to be recognised and celebrated.

The knowledge enjoyed by established home economists is often a result of a lifetime of inquiry (McGregor, 2008). This article is pertinent for home economists because home economics literature that refers to Cartesian philosophy seems to assume that the reader has some basic level of understanding of René Descartes' philosophy and historical context. There are a plethora of texts about René Descartes available in libraries and on the internet, but very little written within the home economics body of knowledge. This gap in literature was affirmed by performing a keyword search of 'home economics' and 'Descartes' via the 'Google Advanced Search Tool'. The search was duplicated using a university library database. The search yielded one article of immediate relevance (see McGregor, 2008). McGregor's (2008) invited epilogue for the book *Reinventing art of everyday making*, edited by Terttu Tuomi-Gröhn, situated a collection of papers in an historical and cultural context. In the epilogue, McGregor (2008) included a discussion about Cartesian dualism and its impact on home economics. Given the nature of an epilogue, it was understandable that McGregor's interpretation of Cartesian philosophy was constrained to just a brief outline. To redress this gap, this current paper revisits Descartes' original work in order to provide some foundational knowledge and to outline the basic premises of his work for home economists. Then, home economists may understand one of the foundational philosophies that influenced westernised home economists' lenses for viewing 'truth' within the observable world around them.

OVERVIEW OF DESCARTES' MAIN PHILOSOPHICAL CONTRIBUTIONS

That philosophers (and home economists) are still fascinated (perplexed, confused, enthralled) by Descartes' work is a testament to the significance of his legacy. This section of the paper comprises the main body of this article and is an overview of Descartes' main philosophical contributions. It will be recalled that the purpose of this critique of his work was to acquire a deeper understanding of Descartes' seminal ideas and to share this knowledge with home economists. For the author, this exploration underpinned the interpretation of spiritual discourses located within historical and contemporary home economics philosophies and practices (see Deagon, 2013).

Dualism (to be discussed in more detail later) is a fundamental component of Descartes' philosophy. It is a state in

which something has two distinct parts or aspects, which are often opposites. The notion of dualism has various meanings across different disciplines. Dualism questions the relationship between the mind (mental) and the body (physical). Dualistic questioning explores relationships between the physical world (measureable, seeable, touchable) and human consciousness (mind, brain, intellect, concept of self) (Robinson, 2011). There are many problems with dualism and conflicts arise because of individual philosophical perspectives (Robinson, 2011). According to Robinson (2011), three prominent conflicting views are materialist, idealist, and dualist. Materialists (generally) believe that, despite an apparent divergence, mental states are just physical states. Idealists (generally) believe that, because the world is an observable and measureable world, physical states are mental. Dualists (generally) believe that both the physical and mental worlds are real and neither can be integrated with the other.

A significant number of subtle differences and/or completely contradictory perspectives arise from these three philosophical standpoints (see Robinson, 2011). Suffice to say, dualism, like the concepts of spirituality or consciousness, is not easy to define. Taken in its simplest form, dualistic thought is like binary code (ones and zeros) or like on/off, yes/no, true/false, beautiful/ugly, or scientific/spiritual. Although many have tried, philosophers are yet to find an acceptable alternative to the basic propositions of dualism, the central tenet of Cartesian thinking. Despite this lacuna, dualism still holds a central place in Western thinking, and therefore home economics thinking.

Aside from dualism, there are several other central elements to Descartes' philosophy that require clarification. Firstly, Descartes' concept of 'a mediator' and how the reader is considered is explained. Then, a cultural and historical context is provided whereby Descartes' philosophy is explained as radical thought in a time when an individual's knowledge was strongly influenced by ancient thought, Kings and the Church. The critique then draws attention to the mechanics of how Descartes believes that human knowledge was possible by understanding material things through the application of mathematical principles. Mathematics was considered a universal scientific language, which could be objectively understood by many. Knowledge was achieved by applying Descartes' *method of doubt*. A précis of Descartes' first scientific method and the 'Cogito argument' are outlined. The paper then further explicates Descartes' notion of dualism, which stemmed

from a deepening critical self-examination of his own thoughts and core beliefs. The implications of Descartes' approaches were that an individual was to doubt all core beliefs and then rebuild a logical, reasonable and predictable universe in which God was the ultimate and omnipresent being holding all other knowledge that is unknowable. This critique reveals Descartes' basic premise that there is mathematics and there is God. On a final note, Descartes' tree of knowledge metaphor delineates the boundaries between known and unknown knowledge.

As a caveat, writing a philosophical critique does not follow a 'traditional' style of academic writing. The discussion that follows uses themes emerging from René Descartes (Descartes, 1901) published works (translated by J Veitch 1962), with a specific focus parts on Parts I, II, III, IV and V of *A Discourse on Method* and Parts I, V and VI of *Meditation on the First Philosophy*.¹ Utilising Descartes' concept of the mediator (see next), this main section of the paper is more of a 'conversation' between the writer and the reader, couched within an historical context within which to situate René Descartes.

Descartes' context: the rise of logic and reason

In the seventeenth century, some of the greatest scientific philosophers during the 'scientific revolution' were René Descartes, Galileo Galilei, Francis Bacon and Isaac Newton (Gay, 1966; Hatch, 2003). These philosophers are generally known as the precursors to the European Enlightenment period. The *Age of Enlightenment, also known as the Age of Reason* (circa 17th century Europe), represents the beginning of the collapse of aristocratic and religious authority. Prior to the Enlightenment, tradition set down that 'truth' was external to the human and one was told by sovereignty or the church what was 'truth'. This way of thinking was challenged by philosophers such as René Descartes.

The mediator

The method by which Descartes recommends an indi-

vidual set about deconstructing and restructuring their core belief system is no simple set of easy-to-follow instructions. It is a daunting but worthwhile philosophical exercise, aided by the concept of mediator. A mediator, in the context of Descartes' written texts, is taken to mean the person reading, interpreting and thinking deeply about the philosopher's work (Newman, 2005). Descartes takes the meditator through a reflective narrative of his own personal journey of discovery which leads to thoughts of his own existence through an understanding of a Christian God. Garber (1998, 2003) suggests that this was a deliberate strategy so as to 'show' the meditator how to use his philosophy rather than 'telling' the meditator what to think and believe.

Descartes' first 'scientific' method

The most compelling philosophical contribution of Descartes is his *method of doubt*. For Descartes, human knowledge is achieved by a constant flux of doubt/certainty/doubt. Descartes believes that all people, regardless of social standing, who have attained a certain level of literacy, and are without biological deficiency (for example, see mental illness, Descartes (1901/1962) in *Method* Part VI, pp. 136–139), may be able to question perceived 'certainties' and use his 'method of doubt' to achieve truth. This new way of thinking very clearly represents a rejection of 'the divine right of kings' and challenges religious doctrine (Gay, 1966). To illustrate, Descartes states,

[T]hose in whom the faculty of reason is predominant, and who most skilfully dispose their thoughts with a view to render them clear and intelligible, are always the best able to persuade others of the truth of what they lay down, though they should speak only in the language of Lower Brittany, and be wholly ignorant of the rules of rhetoric (Descartes, 1901/1962, D, I, p. 7).

Descartes was a rational thinker, influencing a 'constructive scepticism' movement, which did not openly defy, rather, was compatible with, Aristotelian thought predominant at the time (Hatch, 2003; Sorrell, 2000). Aristotelian philosophy stemmed from the works of the Greek philosopher Aristotle (384-322 Before Common Era or BCE). Briefly, and not discussed in detail here, Aristotle believed that human knowledge was achieved through our perceptions (Robinson, 2011). Descartes took the notion of perception further. By publication and correspondence, Descartes encouraged others to actively engage in rational, intelligent and

¹Cited references to René Descartes original works (Descartes, 1901/1962) are as follows:

- Parts I, II, III, IV and V of *A Discourse on Method* (trans. J Veitch 1962)-referred to as *Discourse*, Part, page number of that translated version (e.g. D, IV, p. 27).
- Parts I, V and VI of *Meditation on the First Philosophy* (trans. J Veitch 1962)-referred to as *Meditations*, Part, page number of the translated version (e.g. M, VI, p. 127).

reasonable thinking about how individual foundational knowledge and beliefs were formed, internally and externally acted upon and become known as ‘truth’.

Descartes’ approach requires an individual to significantly examine their own core beliefs by applying his *method of doubt*. He believed that logical investigation had a hierarchical order (Garber, 1998, 2003). It was only through deep inquiry and acquiring specialised knowledge of a subject that the ‘order’ could be determined. In simplified terms, Garber (1998, 2003) explains the process as ‘one starts with a question... then proceeds by asking what we have to know in order to answer the question originally posed...’. This, by a reductive process, leads to another question and so forth, until one comes to a point where the subject has been reduced to its smallest and most natural parcels of knowledge. To draw final conclusions about the topic in question, one must have gained knowledge through thought that is clear and distinctly understood, be reasonable and intelligent, and also be the most probable answer.

Descartes believed that ‘reason’ develops over time. He questioned his own life experience and maturity before embarking on the search for one scientific method that could ‘distinguish the true from the false’ (Descartes, 1901/1962, D, I, pp. 3–9). Descartes states ‘I waited until I had attained an age so mature as to leave me no hope that at any state of life more advanced I should be better able to execute my design’ (Descartes, 1901/1962, M, I, p. 79). Additionally Descartes (1901/1962, D, II, p. 11) asserts that:

...it is almost impossible that our judgements can be so correct or solid as they would have been, had our reason been mature from the moment of our birth, and had we always been guided by it alone.

He assumes an individual has an innate ‘common sense’ to facilitate questioning, and to doubt authority, academic and religious teachings and text, and knowledge itself. ‘Common sense’ also assumes that Descartes himself possessed an ‘innate’ analytical and pragmatic thinking ability. He insists that he is an individual and what he perceives and conceives to be true may not necessarily apply to another individual. Descartes affirms ‘...by a special right, I called my own, pertained to me more properly and strictly than any of the others...’ (Descartes, 1901/1962, M, VI, p. 130). Having a ‘special right’ to think individual thoughts, Descartes acknowledges that his mind and body are clearly and distinctly his own and no other individual could experience the sameness as he himself experiences. Howev-

er, giving the individual the opportunity to pursue his or her own ideas of reality had to be based upon a consensus of ‘reason’.

Descartes’ “I think therefore I am” legacy

Descartes’ standing legacy, thought to be his first and most general rule of metaphysics and philosophy, is ‘*Cogito, ergo sum*’ (in its Latin translation)(Garber, 1998, 2003; Sorell, 2000). This phrase has been interpreted and translated in the following ways; ‘I think, hence I am’ (Descartes, 1901/1962, D, IV, 27), ‘I am thinking, therefore I am’ (Sorell, 2000), and ‘I am thinking, therefore I exist’ (Audi, 1999). Literal interpretation of text taken out of context can produce discrepancies. Newman (2005) clarifies a number of difficulties interpreting Descartes’ ‘first item of knowledge’. Some of his ideas seem in direct contradiction. However, further reading reveals Descartes addressing his own objections (Garber, 1998, 2003). For example, the ‘Cogito argument’ did not arise wholly from one text; rather, his concepts were integrated throughout several of his texts.

The dualistic argument about mind/body separation is a good example of Descartes addressing his own contradictions. To demonstrate, Descartes firstly states that he has a clear and distinct certainty that ‘I [that is, my mind, by which I am when I am] entirely and truly distinct from my body, and may exist without it’ (Descartes, 1901/1962, M, VI, pp. 132–133). Whereas further in that same text he states ‘...the union and apparent fusion of mind and body’ (Descartes, 1901/1962, M, VI, p. 135). He apparently contradicts himself and returns the mind and body to be ‘so intimately conjoined’ that they are not separate. The mediator needs to understand that there is a division between the ‘public’ (external) world of material things and the ‘private’ (internal) world of human thought (Kenny, 2007). There is an important point here-if not read in the context of the passages they are written, a meditator may find certain phrases and ideas difficult to fully interpret and comprehend.

It is also important to note that individuals may often grasp one concept and neglect to closely examine others. To illustrate, Descartes states ‘we conduct our thoughts along different ways, and do not fix our attention on the same objects (Descartes, 1901/1962, D, I, p. 3). Sorell (2000) concurs by stating ‘central claims’ in the *Meditations* ‘were misinterpreted by his followers’. Therefore, given Descartes’ complex set of relationships between internal thoughts conceived in the mind and external subject matter, one would

recommend meditating on Descartes as a whole experience to gain insight into all the arguments he presents. To this effect, the present writer makes a disclaimer and casts Cartesian doubt across her own ability to fully comprehend Descartes' ideas of an individual because substantial knowledge, experience and maturity are still to be realised. Nonetheless, she proceeds with this paper.

Using the method of doubt to create knowledge

Descartes developed what he called the *method of doubt* as a way to find truth. Assuming that data gained from our senses can be fallible (i.e., false, in error, not accurate, mistaken), he yearned for a route to knowledge that could be trusted as true. He drew on the notion of *scepticism* (intentionally doubting one's beliefs by questioning, probing and testing) in order to drill down to the truth. What is left after this method of doubting everything (sorting out true from false claims), he believed was true knowledge. From the most elementary truths of mathematics and physics, *foundational truths* could then be deduced without the distortion of sense-based experiences (Sorell, 2000).

At an even higher level, Descartes was also seeking a method that unified all the sciences (Sorell, 2000). He sought to construct one method of scientific inquiry by which any subject could be explained or discussed intelligently; that is, a 'master method' or formula, which linked all scientific research through a set of structured procedures so that material things could be understood in some rational and standardised fashion (Sorell, 2000). This formula best used principles of mathematics (geometry, algebra, mechanics, optics) to explain objects and phenomena. The resultant scientific method is now known as the Cartesian system (Audi, 1999; Robinson, 2011).

Staying true to his mathematical principles, Descartes consistently uses architectural terminology such as *demolition*, *building*, *foundations* and construction in the literal sense, as a metaphor for the deconstruction and reconstruction of an individual's knowledge. The architectural metaphor likens preparing the mind to building a meticulously planned city from the ground up (Descartes, 1901/1962, D, II, p. 10). Foundationalism is based on Euclid's geometry, which Descartes expounds as complementary methodology to be applied prior to deconstruction of thought (Newman, 2005); that is, as a preparatory phase before applying his *method of doubt*. Newman (2005) summarises that Descartes believes clearing and then reconstructing precon-

ceived ideas and opinions could release the meditator to then 'discover genuine first principles'. Descartes writes '...there are many other beliefs which, though seemingly the teaching of nature, are not in reality so, but which obtained a place in my mind through a habit of judging inconsiderately of things' (Descartes, 1901/1962, M, VI, p. 135). In other words, until he was aware of his own mind, he was just acting on experience and instinct and some embedded internal knowledge to make sense of the world around him. As previously outlined, this self-questioning process assumes intelligence, 'common sense', reason, and maturity of the individual.

Considering an unconscious act of perception, that is, a thought recalled from a storehouse of knowledge perceived by the senses, Descartes explains a three-step process for examining a thought as a conscious act. Descartes explains,

...I will recall to my mind the things I have hitherto held as true, because perceived by the senses, and the foundations upon which my belief in their truth rested; I will, in the second place, examine the reasons that afterwards constrained me to doubt of them; and, finally, I will consider what of them I ought now believe (Descartes, 1901/1962, M, VI, p. 129).

In sum, he starts by recalling those ideas that have been perceived previously by the senses, then doubts and deconstructs those thoughts. Once reason has been applied to the thought, and the meditator is convinced of its truth, then one may move to a place of belief.

Dualism: origins of the 'separations' of 'things'

As will be recalled, dualism questions the relationship between the mind (mental) and the body (physical) (Robinson, 2011). Descartes sought a way to reconcile his thoughts with the physical world around him. For Descartes, scientific demonstrations using objective observation and mathematical principles (as tools of inquiry) achieved the most reliable way of determining if something was true knowledge. However, the act of 'observing' requires humans to use their senses. Human subjectivity and data received by the senses presents some difficulties within the Cartesian system (Audi, 1999; Garber, 1998, 2003; Robinson, 2011). The basic proposition of Descartes' *method of doubt* is to reject everything perceived and consumed by the senses (sight, hearing, smell, taste, touch), break down that object into a scientific, rational and observable mathematical ex-

pression of its properties (weight, height, length) until the object is deconstructed into its smallest components of understanding (Sorell, 2000). By assigning mathematical propositions to objects, one could then ascertain their 'true' nature. Thereby the object is exposed for its most basic and natural properties and can no longer be denied as 'false'. From this point, the object can then be reconstructed from its smallest components 'with the view of erecting it anew' (Descartes, 1901/1962, D, I, p. 8). An individual may then be satisfied that she or he has a 'clear and distinct' or 'true' knowledge of that object. By applying a mathematical expression to an object, this knowledge can be verified by others who make similar inquiries. Importantly, this also means that subjective 'truth' has been made into objective 'truth'-external and independent of the individual. Descartes claims success by his own measures and methods:

...my design was singly to find ground of assurance, and cast aside the loose earth and sand, that I might reach the rock or the clay. In this, as appears to me, I was successful enough; for, since I endeavoured to discover the falsehood or incertitude of the propositions I examined, not by feeble conjectures, but by clear and certain reasonings, I met with nothing so doubtful as not to yield some conclusion of adequate certainty, although this were merely the inference, that the matter in question contained nothing certain (Descartes, 1901/1962, D, III, p. 23–24).

Thus, Descartes was suggesting that, first, one must have a clear understanding of the question posed in order to achieve a clear answer. By deepening these questions, a mediator could descend the hierarchical order from the original question with clear and distinct perceptions to further questions, which are lead by 'intuition' (Sorell, 2000).

The boundaries of human knowledge: Descartes' tree metaphor

The concept of *intuition* is where Descartes moves from the physical realm to metaphysical philosophy. Descartes believes that people should not accept what they hear, read, believe or experience without questioning everything. People would necessarily be left wondering what knowledge is of value? Within Descartes' context, knowledge is of value if it can be determined to be true. Descartes used a tree of knowledge metaphor to explain the resistance point between *certainty* of 'finite knowledge' derived by mathemat-

ics and science, and *uncertainty* of 'infinite knowledge' obtained by subjective thought (intuitions, feelings and emotions)(Hatfield, 2008; Sorell, 2000). Sorell (2000) explains that *finite knowledge* are those things with substance that can be categorised as true knowledge and *infinite knowledge* enters a metaphysical space where Descartes attributes God as the keeper of all knowledge that does not have substance (thoughts and God). In the *Preface* of the French edition of *Principles* (Garber, 1998, 2003; Hatfield, 2008), Descartes writes:

Thus the whole of philosophy is like a tree. The roots are metaphysics, the trunk is physics, and the branches emerging from the trunk are all the other sciences, which may be reduced to three principal ones, namely medicine, mechanics and morals [respectively, the external world, the human body and the conduct of life].

The metaphysical realm contains uncertain knowledge such as intuition. Intuition means having an underpinning understanding that 'I see very clearly that in order to think it is necessary to exist' (Descartes, 1901/1963, D, IV, p. 27), which results in the philosophical question how do I know I exist?

God in the Cartesian system

Descartes believes that God is the ultimate explanation for all unknown and unknowable knowledge. God's existence is important to Descartes' philosophy. It allows the human mind to have a reference point for the unexplainable and unknowable. Descartes presents his arguments as sets of dichotomies. For example, when teasing out singular truths from an original question, one may ask, what is known and what is unknown; or, God exists or he doesn't; or, I am or I am not; or, it is good or evil. As previously discussed, this is the basis of Cartesian dualism (Audi, 1999; Robinson, 2011; Sorell, 2000).

To explain God in the Cartesian system, the separation of thought (conceived of the mind) from object (perceived with the senses), Descartes' separation of mind from body is useful. For any object that is not given certain quantifiable attributes (the body has attributes that are quantifiable), the object becomes 'just is' and of its own nature, which Descartes attributes to God. However, thoughts from the mind are not quantifiable. Therefore, without knowledge of God in a pure and perfect form, knowledge derived of the mind is not able to be clearly and distinctly understood to be true. In relation to the existence of God, Des-

cartes enters a *circular argument* (Sorell, 2000). The argument simplified is that knowledge of God is obtained through thought, therefore God must exist; but employing his own methods, Descartes must doubt his own thoughts and therefore must also doubt the existence of God (Kenny, 2007; Sorell, 2000). Remembering the historical context and threats of heresy (death) within which Descartes explored the existence of God; the circular argument is reported to be extremely abstract (Sorell, 2000).

DISCUSSION: DESCARTES AND HOME ECONOMICS

The previous section introduced and explained the basics of Descartes' most compelling philosophical contributions: the mediator, the first scientific method, the 'I think therefore I am' legacy, the *method of doubt*, dualism as separation of things, the tree metaphor, and God in the Cartesian system. This paper favoured his *method of doubt* as relevant to contemporary home economics. His 'scientific' method provides a comprehensible way to deconstruct and reconstruct all manner of 'things' and 'thoughts'. 'Scientific' methods, such as writing a recipe or sewing from a pattern, are good examples of Descartes philosophy 'at work' in home economics. We ask precise questions about the components that make up a final product. In its simplest form, asking questions of this nature is Descartes 'method' in action in home economics. These processes and procedures can be underpinned by knowledge of Descartes' method. Once the right questions have been asked, and the 'scientific' method has been weighted, measured and written down, reconstruction can commence and someone else may reconstruct or reproduce similar products.

To further translate Descartes' 'separations' legacy into a modern example, the biomedical model of health, 'treats' human beings as having separate parts (Chuengsatiansup, 2003; Hawks, 2004). Medicalisation is necessary and means that if an arm is broken, it can be 'fixed' using scientifically derived medical procedures (Rabinow & Rose, 1994). In addition, this treatment becomes a known and widely accepted procedure recorded and disseminated to doctors all over the world. However, despite the tradition of medicalisation with its weights, measures, procedures and record keeping, *ideological* conflicts continue to occur between 'scientific' and 'spiritual' aspects of home economics, mainly because of misinterpretation, misunderstanding or resistance to dualism.

Variances between home economists' epistemologies and ontologies have also caused tensions within the field for over a century (Andrews, 1939; McGregor et al., 2008). This paper does not enter into discourse about spiritual aspects of home economics or theological discussion about God. Locating common values and shared meaning for spirituality amongst home economists is the subject of other articles and publications still to be written (Deagon, 2014; Deagon & Pendergast, 2012; McGregor & Chesworth, 2005). In this paper, the origin of the 'scientific method' was examined in order to comprehend the issues at the core of dualistic scientific/spiritual tensions. As will other home economists, this inquiring researcher/home economist required a deeper understanding of Descartes' work in order to explore interpretations that may have an impact on contemporary home economics philosophies and practices.

Scientific methods in home economics are axiomatic (self-evident) and necessary. The author's pursuit to understand Cartesian philosophy resulted in a celebration of the origins of Descartes' scientific method and its enduring contribution to home economists' technical knowledge and practices. However, acting as a mediator and arising from Descartes' suggested critical self-examination process, the author identified internal philosophical conflicts between the author's sociocultural perspectives of human beings and the mono-focused scientific approach offered by Descartes. In this regard, for many years, leading home economists have attempted to refine and clarify the *overarching* philosophy or 'why' of the profession. This has manifest as a challenge to the dominance of scientism. Some home economists recommend the profession be guided by ecological and holistic approaches to human beings (Deagon, 2013; McGregor, 2011a; Nickols, 2003). Ecological and holistic approaches to human beings may seem 'at odds' with scientifically derived models of health and wellbeing; but, they can be perceived as mutual partners.

Human beings are not always logical, reasonable and predictable as Descartes predicated. Home economists interact with people in complex circumstances where 'scientific methods' cannot easily explain or examine phenomena. Human beings do not come with instruction manuals or quality assurance documentation. People are complex, live in complex environments, with multi-factors imposing influence, and cannot always be 'treated' within a scientific frame. To arrive at these complex understandings of human beings requires an examination of the underpinning philosophies that inform these approaches. This under-

standing is compromised because the foundational philosophical concepts upon which the scientific/spiritual debates occur have been overlooked, misinterpreted or taken as established knowledge in westernised home economics literature. To address this dilemma, the author set about rectifying this omission in the home economics literature by conducting a critique of the philosophical work of René Descartes.

CONCLUSION

The purpose of this article was to provide an expert novice's interpretation of Descartes philosophy on how he believed human knowledge was possible and to share this knowledge with home economists. The critique shared in this paper was important because it further ensures that home economists may better understand authors who refer to Cartesian philosophy, foundationalism, reductionism, and dualism. As a direct result of this exploration, the author/home economist/researcher had cause to doubt and re-think impacts that westernised philosophy has had, or may have, on home economics. This philosophical doubt is important because continuing philosophical explorations in home economics stimulate discussion and facilitate shifts in thinking and practice.

Indeed, knowledge of philosophy is important for home economics because it provides a basis for the use of particular underpinning theories that drive the profession and its practice. To illustrate, Descartes' *method of doubt* is still a useful tool in twenty-first home economics, as a scientific method, and as a tool for critical self-inquiry. From a European philosophical perspective, Descartes' *method of doubt* provides an insight into understanding how 'things' and 'thoughts' work in home economics. However, Cartesian philosophy may not be appropriate, or even relevant, in some social, cultural, environmental, religious or spiritual contexts. René Descartes' philosophy is important; however, the next layer of theory to overlap a Cartesian system of knowledge is an understanding that human beings are innately spiritual with the capacity to be creative, emotional, intuitive, and are also unpredictable and ever changing.

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