
A preliminary investigation of a family of cognitively significant emotions

Mashuq Ally

Department of Philosophy, University of South Africa

Abstract

In this paper I attempt a preliminary investigation of a family of cognitively significant emotions (which includes inter alia interest, attention, surprise) while focusing more specifically upon the philosophically richer curiosity and wonder. I examine them from various perspectives, primarily those that may be termed historical, phenomenological, and virtue-theoretical. My intention is to illuminate some of the vital functions that curiosity and wonder, in particular, fulfil. It is hoped that such an exploration may draw attention to this much-neglected family of cognitively significant emotions and encourage future studies.

The need for new experience appears to be a basic need which is shared by all human beings throughout history. Women are interested in new fashion and new home appliances. Scholars in their ivory towers are keen to encounter new theories and discoveries. Children are fascinated by new video games and toys, while their fathers are looking for new business opportunities. The term "curious" and a number of cognates are used to capture such tendencies, traits and emotional attitudes. An adequate analysis of this family of cognitively significant emotions¹ would examine the history of curiosity and its relation to human nature and to the child; indicate what it is about human beings that makes us capable of curiosity, wonder and surprise; describe some of the vital functions that curiosity and wonder, in particular, fulfil; locate curiosity and the related concepts of wonder, interest and attentiveness within the nexus of ordinary experience; examine the components of curiosity and wonder and their inter-relations; consider the relation of curiosity to human values, and assess our evaluations of contemporary manifestations of curiosity.

In what follows I briefly want to discuss these topics, with the intention not so much to give definitive answers as to make a preliminary investigation of some wide-ranging facets of these cognitive emotions. Interest is an essential human characteristic; we human beings are creatures of a universe that in its many aspects evokes our intense attention, wonder and surprise. Therefore a philosophical exploration of these concepts may not be without merit.

1. A short history of curiosity²

Curiosity is now widely regarded, with some justification, as a vital ingredient of the inquiring mind and, more particularly, as a crucial virtue for the practitioner of the pure sciences. We have become accustomed to associate curiosity with innocence and, in its more mature manifestations, with the pursuit of truth for its own sake. It was not always so. Traditionally curiosity was classified amongst the vices and its complicity in the commission of the first sin represented a major obstacle to early modern projects to enlarge human learning (see Harrison 2001: 265).

The Greeks had little to say directly on the issue of curiosity or its connection with forbidden knowledge, and while the general import of the myths of Pandora and Prometheus is clear enough, curiosity was not identified as a vice in the moral philosophy of the writers of classical antiquity. If anything, it was regarded as a natural human propensity. Aristotle, in the opening lines of the *Metaphysics*, declares that the desire for knowledge is the natural human condition. But he later qualifies this by stating that it is wonder (*thauma*), rather than curiosity (*periergia*), that is the beginning of knowledge.³ Amongst Roman authors, curiosity was the subject of mild rebuke. The specific moral category *curiositas* first appears in Cicero, where it has dual aspects: on the one hand, curiosity is a necessary motivation for the pursuit of knowledge; on the other, it is an intemperate and excessive desire for unsuitable or inappropriate knowledge. If the natural state of the human being is to seek knowledge, its excess becomes the vice of curiosity. Seneca's (1932: 70) view was typical: "The desire to know more than enough is a form of intemperance."

The most comprehensive analysis of curiosity amongst the Church Fathers was provided by Augustine. Curiosity is at work

...when people study the operations of nature which lie beyond our grasp, when there is no advantage in knowing, and the investigators simply desire knowledge for its own sake (Augustine 1991: 211).

This was the besetting sin of pagan priests, philosophers, and Manichaean heretics. In various ways they had all succumbed to a "form of temptation," a "lust for experimenting and knowing," a "diseased craving," a "vain inquisitiveness dignified with the title of knowledge and science." Looking at the objects of curiosity with its base motivations, Augustine (1991: 211) wrote of those who, forsaking virtue,

...imagine they are doing something great, if with surpassing curiosity and keenness they explore the whole mass of this body which we call the world.

The rehabilitation of curiosity began with Bacon in the sixteenth century and

increased in the following century with the otherwise quite different approaches of Hobbes and Descartes. Hobbes turned his back completely on the long-standing moral tradition in his account of curiosity. He ignored the narrative of The Fall and avoided the usual associations of pride, vanity, and forbidden knowledge. Instead, curiosity was the morally neutral “appetite of knowledge.” Indeed, more than an innocuous appetite, curiosity was actually praised as the one characteristic that distinguished man from the beasts and as the beginning from which “is derived all philosophy.” Hobbes (1966: 44) regarded this latter relation as being to the credit of curiosity. For his part, Descartes (1985: 355-56), in his account of the passions, insisted that only the extremes of wonder and curiosity will lead to error. It is “excessive wonder” and “blind curiosity” that must be controlled if useful knowledge is to be attained.

By the middle of the century the rehabilitation of curiosity was all but complete, and there was general agreement that it was a virtue. Hume, for example, who could hardly be said to share the priorities of the natural theologians, nonetheless defined curiosity as “love of truth” or “love of knowledge.” All knowledge, he insisted, arose out of curiosity, and indeed the suppression of this natural inclination could only result in religious prejudice, “stupid ignorance,” and “barbarism.” As for curiosity and The Fall, Hume (1964: 355n) found implausible the notion that God would punish the human race for “slight curiosity and natural desire of life and knowledge.” In short, if for Aristotle wonder was the beginning of knowledge, for Hume and his contemporaries that honour now fell to curiosity.

This was a remarkable reversal. As Daston and Park (1998: 304) have observed in their history of wonder:

The passions of wonder and curiosity had . . . been traditionally remote from one another in medieval natural and moral philosophy, and they were to separate once again by the mid-eighteenth century. Moreover, during the same period that wonder and curiosity first approached and then withdrew from one another, the trajectories of their valorization in natural philosophy also crossed, with curiosity ascending and wonder declining. On the one hand, the wonder that had once been hailed as the philosophical passion par excellence was by 1750 the hallmark of the ignorant and barbarous. On the other hand, curiosity, for centuries reviled as a form of lust or pride, became the badge of the disinterested and dedicated naturalist.

2. The roles and functions of cognitively significant emotions

Since Plato, most philosophers have drawn a sharp line between reason and emotion, assuming that emotions interfere with rationality and have little to contribute to good reasoning. However, research in cognitive science is

increasingly challenging the view that emotions and reason are antagonistic to each other. Evidence is accumulating in cognitive psychology and neuroscience that emotions and rational thinking are closely intertwined (e.g., Damasio 1994, Kahneman 1999, and Panksepp 1999). According to Thagard (2002: 236), emotions such as curiosity, interest, and wonder play a crucial role in the pursuit of scientific ideas. He points out that because rational calculation of maximal utility is effectively impossible, it is appropriate that scientists rely on cognitive emotions such as interest and curiosity to shape the direction of their inquiries.⁴ According to him (2002: 240-241), "Interest, wonder, curiosity and the avoidance of boredom are key inputs to the process of selecting of scientific questions to investigate."

Evolutionary theorists have drawn attention to the importance of understanding the role of natural selection in shaping the activities of our brains. They alert us to the fact that our brains respond to uncertainty by selectively organizing information in such a way as to facilitate our biological survival — and the perpetuation of the genes that design these brains (LeDoux 1996: 137). And as Fuller (2006: 368) helpfully reminds us,

The brain's most pressing concern is that of discerning agency and intention in what are otherwise causally opaque situations. The brain is wired to seek the source of causal agency, purpose, or intentionality of events that vitally impinge on our lives.

Izard and Ackermann (2000: 257) suggest that wonder is closely associated with the emotions of both joy and interest. Certain environmental stimuli elicit heightened interest that

...motivates exploration and learning, and guarantees the person's engagement in the environment. Survival and adaptation require such engagement. Interest...is the only emotion that can sustain long-term constructive or creative endeavors.

Wonder, because it also seems to be accompanied by many of the same emotional functions of joy, is also capable of generating such long-term engagement with the surrounding world. Wonder imbues the world with an alluring quality, fostering increased openness and receptivity rather than immediate utilitarian action.⁵ And, as I shall explain more fully below, wonder diverts attention away from the immediate physical environment to a consideration of higher-order levels of thought. Wonder leads not to utilitarian manipulation of specific parts of our environment but rather to fairly passive contemplation of how the parts of life fit into some larger whole. This includes the consideration of causal principles that are not "out there" in any way detectable by our physical senses. In other words, wonder is associated with the brain's adaptive task of "agency detection" but does

so by seeking the intentionality of the whole that lies behind the observable parts (Fuller 2006: 36).

The role of wonder in generating modes of cognitive activity required for moral and metaphysical thought can first be detected in early childhood with the appearance of children's "why" questions. The work of Jean Piaget is relevant to any analysis of the origin and function of wonder in individual human life. Piaget's goal was to elaborate a broadly biological explanation of knowledge. Because he viewed knowledge as a form of adaptation continuous with organic adaptation, he set about studying the cognitive development of children as they adapted to ever-expanding environmental perplexities.

Other emotions, such as those of surprise and curiosity, are likewise critical to the overall course of cognitive development. All three emotions originate as reactions to unexpected events, mobilizing efforts to change cognitive structures in ways that will ensure our overall well-being. Surprise is the most general of these "orienting responses" and may easily combine with curiosity or wonder. Charlesworth points out that Piaget's entire model of cognitive development hinges around the central role played by the emotion of surprise. He (1969: 299-308) explains that the emotion of surprise is a complex orienting response that has an "instigatory effect on attentional and curiosity behaviors" needed if unexpected "stimuli are to become part of and help reshape existing cognitive schemata." Surprise reactions to unexpected stimuli have a general arousal effect. Surprise mobilizes selective attention to the environment and thereby alters our manner of attending to, and processing, sensory information. The emotion of surprise thus ensures that the organism behaves in such a way as to produce new knowledge about problematic properties of the environment:

[U]nder normal environmental conditions surprise reaction and subsequent attentional and curiosity behaviors are very hard to suppress, and that for this reason they seem to be good candidates for the mechanisms that insure that most individuals make the progression from sensorimotor intelligence to formal thought (Charlesworth 1969: 308).

Piaget (1959: 277) was also aware that curiosity, like surprise, motivates cognitive growth. He frequently observed how curiosity propels children not just to register experiences passively but also to organize and interpret them. Of special significance is the fact that it motivates sustained investigation of the relationship between ideas and experience. Curiosity therefore helps individuals refine their conceptions of the world to correspond more closely with the actual facts of experience.

Piaget's research focused primarily on the developmental acquisition of domain-specific knowledge rather than the ability to think in ways that stretch beyond domains. Thus Piaget and cognitive psychologists in general extol the

role of curiosity in fostering the assimilation of environmental patterns into our working stock of behavioural strategies but inadvertently denigrate cognitive activities that seek to make connections between different kinds of things or to put things together in higher-order ways. And these, of course, are the cognitive activities most directly stimulated by wonder. However, the total context of Piaget's work provides conceptual tools for understanding the developmental link between the emotion of wonder and our capacity for metaphysical thought. He (1959: 162-238) noted that the emergence of "why" questions in early childhood is linked with a capacity to think about the existence of an imperceptible reality behind the apparent perceptible world. That is, Piaget (1959: 164-168) drew attention to the fact that children are naturally curious about the purposes, intentionality, or teleology of things. It is the natural tendency of children to infer the existence of a reality that in some way lies beyond or behind observed reality — and it is this more general sense of reality that enables them to unite objects together or to interpret their purpose or meaning.

Ultimately, the existence of higher-order conceptions of reality frees us from sheer necessity and brute survival to consider what our existential and ethical response to life might optimally be. Fuller makes the point that just as curiosity propels children to sustain their inquiries into the workings of physical reality, wonder is a prime ingredient in the emergence of higher-order conceptions of existence. According to him (2006: 375),

Wonder disrupts equilibrium and prompts us to accommodate to the most general order of thinking possible — an order from which we might contemplate the intrinsic cause or intentionality of things. At least potentially, neither children nor adults have any problem distinguishing between the actual and the possible. The difficulty lies instead in discerning the boundaries of the possible. We lack means of empirically testing our conceptions of the possible. For this reason we typically rely on our own sense of plausibility and, of course, on the mythic and theological traditions of our communities.

3. Phenomenological considerations

Until now, I have mentioned curiosity countless times without considering what it means to be curious. According to Kubovy (1999: 147), to be curious is to get pleasure from learning something that one did not previously know. He contends that curiosity has its roots in animal behaviour, having evolved from the need to search for food. Many mammals prefer richer environments over less complex ones. Human beings can be curious about a very wide range of subjects, from the trivial to the sublime, and scientists direct their intense drive to learn things that are unknown not just to them, but to people in general. Consider Goldman's explication (1999: 3):

Our interest in information has two sources: curiosity and practical concerns. The dinosaur extinction fascinates us, although knowing its cause would have no material impact on our lives. We also seek knowledge for practical reasons, as when we solicit a physician's diagnosis or compare prices at automobile dealerships.

According to Goldman, even when nothing of practical importance seems to ride on finding out how things stand with respect to a certain subject, given our natural curiosity we simply have a natural interest in finding out how they *do* stand. The outstanding question then is this: what are the features, in virtue of which certain *subjects* or *topics* are interesting? Although several types of questions may be specially tied to our sense of curiosity, we can get a better sense of the distinctive ways in which our curiosity comes into play by focusing on two types in particular. Thus, one important type of question that seems to be specially linked to our sense of curiosity has something like the following form: *Why are things this way rather than that?* A second type of question relates to our interest in human behaviour and might be put (again quite crudely) as follows: *What is he/she doing?*

In claiming that questions of these types are specially tied to our sense of curiosity what I mean is that finding out the answer to particular instances of these questions has a value for us in a way that finding out the answer to instances of other types of questions does not. As a first approximation, we can try to capture the distinction as follows: whereas epistemic curiosity essentially responds to our sense of *puzzlement*, prudential curiosity responds to some basic prudential concern of ours (such as a concern for survival, etc.), but not in a way that essentially involves a sense of *puzzlement*. Lear (1988: 3), for one, marks a distinction of this kind when he refers to Aristotle's claim that "all men by nature desire understanding (*episteme*)." He considers that Aristotle's "desire" here is fuelled more by *puzzlement* than "mere" *curiosity*. It is worth quoting Lear (1988: 3) at length here:

From earliest childhood humans display an innate curiosity. Indeed the British psycho-analyst Melanie Klein once called this childhood curiosity *epistemophilia* — a love of *episteme*. But curiosity is not I believe the best way to conceptualize what drives men on. Perhaps it is better to think of man's natural capacity to be puzzled. We tend to take this capacity for granted. Yet it is a remarkable fact about us that we cannot simply observe phenomena: we want to know *why* they occur. We can imagine beings who simply watched the sun set and the moon rise in the heavens: they might come to expect regular transitions, but they would lack curiosity as to why the changes occur. We are not like that. The heavenly motions cry out (*to us*) for explanation.

On Lear's view, then, curiosity seems to have a kind of prudential orientation that distinguishes it from a more purely epistemic or intellectual

puzzlement. However, we need not accept that the kind of puzzlement Lear describes is distinct from our natural curiosity. Instead, I think we can say that what Lear, following Aristotle, is pointing to in emphasizing the notion of puzzlement is that there is a distinctive *kind* of curiosity that we need to be alert to — a kind linked to our distinctively epistemic interests and concerns rather than to our primarily practical ones.

Focusing on the notion of puzzlement also helps to show the way in which the two types of questions that I highlighted earlier — on the one hand, *Why are things this way rather than that?*, and on the other, *What is he/she doing?* — are rather more different than we might originally have suspected. When we are prompted to ask a “Why are things this way rather than that?” question, this is presumably because it seems to us that something about the world might have been otherwise, and we want to find out what it is that accounts for the difference between these alternatives. Thus, for example, when the tides lapping up on the shore are sometimes high, sometimes low, we seem naturally interested in finding out what it is that accounts for the difference between the high and the low tides. So the development of non-instrumental goals is intimately tied with emotions such as interest, wonder, and curiosity, which are just the goals that spur scientists on.

I want now to look at some formulations involving being curious, taking an interest in, and being attentive to. Consider people who come to know each other very well simply by living together, year after year.⁶ They each value what they know about the other but may not be inclined actively to seek out that knowledge. Here the relevant virtue is *attentiveness*. Possessing one kind of moral perception, the attentive person is good at sensing another person’s experiences, moods, and needs, perhaps even before the other person is aware of them. This suggests that both curiosity and attentiveness are each distinctive virtues that are uniquely important for caring about things more generally.

How is being curious different from “taking an interest”? It is worth noting that we use “indifference” as an opposite for both traits, perhaps suggesting our lack of attention to the distinction between them. Baumgarten propose this formulation: to be interested is to care to know (in the sense that it matters to us whether we know), whereas to be curious is to desire to know. Attentiveness differs from curiosity in being more obviously a capacity, at least if we rely on ordinary usage. One’s curiosity will certainly bear more fruit if one is also attentive. But curiosity is a capacity, too (e.g., for asking questions), and other features of curiosity are more helpful for distinguishing it from attentiveness (and “taking an interest”) and for showing its distinctive value in relation to caring.

First, being curious involves a greater exercise of autonomy. What the attentive and “interested” person learns depends on what the world presents

to her whereas the curious person raises questions that go beyond what it is possible to be attentive to. Although the desire to know does not always involve asking *explicit* questions, it implies a questioning spirit of observation that nonetheless goes beyond mere attentiveness.

Curiosity most clearly differs from both attentiveness and from “taking an interest” in being a desire. The curious person will experience a *lack* before the desire for a particular kind of knowledge is satisfied. In contrast, neither the attentive person nor the one who “takes an interest” will experience the unfulfilled desire or the unanswered question that is a component of curiosity. Curiosity is especially important in deepening one’s care and concern for another person because even in a close relationship, much that one needs to know and understand about another person in order to care deeply will not be apparent without active seeking, even for the person who is extremely attentive and “interested.” Especially during inevitable episodes of misunderstanding and estrangement, attentiveness without curiosity will usually be insufficient to break the deadlock and re-establish the communication needed for a sustained caring relationship. Curiosity may also generate caring in relationships that are not already close. For example, an attentive teacher might notice that a particular student is often bored or reacts in an especially strong way to certain topics. But only curiosity will lead to going beyond the phenomena presented to asking “why,” a form of engagement that may lead to both greater knowledge and caring. Though the curiosity may evolve from prior concern for the student, it might not — perhaps what may prompt curiosity are wounded pride and the desire to learn why one’s presentation fails to spark a student’s interest. In that case curiosity may be what leads to a caring relationship in the first place.

The importance of curiosity for moral concern is also evident where the object is not a human being but perhaps a culture different from one’s own. Here, again, the initial curiosity may stem from something other than concern (e.g., puzzlement or even irritation). But a person who acts on a desire to *know* about a culture is likely to come to a greater *understanding* of its distinctive features, which makes it more likely that the person will come to appreciate it. This is not an inevitable progression — increased knowledge of another culture could lead to repulsion and disgust — but often a desire to know more about something will be a prerequisite to being concerned about its welfare. It is difficult to imagine someone’s being concerned about the welfare of something she knows little about, and there are many things in the world worth being concerned about that we will be ignorant of if we are not curious. Most of these will not offer themselves to us; we may need to seek them out for investigation as well as to attend to them once they are present.

It seems fair to conclude that curiosity is a distinctive virtue which, compared to attentiveness and “being interested,” more fully expresses human autonomy, plays a distinctive role in caring relationships, and enables us to learn about things we would not otherwise know. Insofar as curiosity contributes to caring, it is likely to have social benefits, but since caring and close relationships are reasonably considered components of a well-lived life, curiosity has moral value for a person even apart from its contribution to the welfare of others. Having said that, I do not exclude the possibility that attentiveness, or a related virtue that emphasizes openness and receptivity rather than autonomy, may have distinctive advantages not possessed by curiosity. Curiosity and attentiveness may be virtues that contribute to different conceptions of living well, or each may be more appropriate for different kinds of encounters with the world.

I want now to consider wonder. According to Fuller (2006: 8-9), one might distinguish between curiosity and wonder in two important ways.

First, we typically associate curiosity with active attempts to understand, and even manipulate apparently anomalous features of the environment. In contrast, the emotion of wonder is more passive; it usually leads to cognitive reflection about the meaning of unexpected perceptions rather than to active exploration. Second, curiosity is associated with analysis. It entails efforts to understand events or objects by breaking them down into their component parts. Wonder, on the other hand, is the experience of contemplating how the various parts relate to a greater — even if unobserved — whole.

A common type of wonder, the one indicated in the usual English dictionary meaning, is a strong emotional experience containing elements of ideation and disposition to act which are, in the initial stage, suppressed and undeveloped. Wonder in such cases is (1) a feeling of startle or surprise; and (2) an incipient, inquisitive interest in the object of wonder (the wonderful). The excitation, usually sudden or intense, arises in response to an occurrence that may or may not be identified in perception. We find a newly blossomed rose wonderful: the primary determinative occurrence is that we are in love, though we believe that the wonder originates outside ourselves. Wonder in these common cases is usually occasioned by some thing or event that appears extraordinary and is in fact unexpected. It seems that what gives an experience the quality of wonder is just such a sense of sharp novelty in qualitative awareness and meaning.

The excitation of wonder ranges from the sudden and intense to the gradual and moderate, until it shades into ordinary emotion. What seems ordinary to most persons may appear to the child or adult who is receptive in some novel light exciting the “wondering” that is both emotional and curiously cognitive. While an organism capable of emotive wonder is necessary to the

evocation of wonder, an object is required to evoke it. The wonderful is any object of any wondering, excited interest. So far as a person's perceptions, activities, and meanings are not entirely routinized and stereotyped, so that she responds to the unique qualities and forms of things, then in principle every particular occurrence may become an object of surprise and curiosity for her, i.e., something wonderful in greater or lesser degree.

What makes ordinary experience "ordinary" is a flattening out of the erratic, unusual and untypical. "Ordinary" experience is just that experience which has a regular, accustomed, predictable character. But it is not by any means the only kind of experience — as is shown by art, which enhances qualitative experience; by science, which invents or discovers new orders and advances by just such innovation; and even by drug-induced experiences which by removing inhibitions to perception give a very intensified and free flow of qualities. Thus the conditioning effects of habit tend to determine not only what we regard as ordinary but also what we are ready to respond to as wonderful. Centuries ago viewing an eclipse, comet, or thunderstorm was an invariable occasion for wonder, since such occurrences had not yet been integrated into the system of expectations and meanings of the times. Less than a century ago, people used to wonder at the marvellous cures effected by medical science. Now they are commonplace and have lost most of the quality of the wonderful once attributed to them.

Wonder should be distinguished from the almost purely emotional, negative experience, like panic or terror or awe. It retains an element of detachment or ideation, a minimal curiosity, a control of emotion that gives psychic distance to the event and permits at least in some small degree the play of imagination. When detached imagination is overcome by emotion, such as great fear or terror, wonder disappears. On the other hand, although "wonderful" often means satisfying or favourably esteemed, the emotion of wonder is not always pleasant. A mountain-climber or a mother giving birth or a heroic person under torture may find their experiences wonderful though it means travail and possibly death. What attracts and holds the wondering imagination is the mystery of quality and meaning, dramatically or silently challenging us, waiting to be unravelled. It is this lure of the unknown, this temptation of exploring the hidden labyrinth that gives to the wonderful its peculiar fascination. In such situations too it may be that my sense of my small body here and of the great sky over me, and of the uncontrollable and magnificent display before me, makes me feel powerless. This may give me a sharp sense of contrast and overwhelming novelty, alerting me and more or less alarming me. In these cases wonder borders on awe.

I have already spoken of a common type of wonder, a compound of surprise and inquisitive interest. In these instances we can discriminate the subjective and objective components of wonder: the one is affective and

receptive; the other, effective and active. Wonder on the one side may become as a novel experience *so* disruptive that — incapable of assimilation into the person's existing system of meanings — it is dissociated from them and repressed. Alternatively, it may be welcomed and sought. Or it may be so affectively unifying and overmastering that symbolic meaning cannot grasp or accommodate it; it becomes, in the report of the mystic, ineffable, though, it is easily recalled and positively valued. On the other hand, where the effective and active components of wonder begin to enter into ascendancy, wonder can become any of a number of meaning-moulding activities (art, science, etc.).

Thus there are two less common types (or sub-types) of wonder: the first, a receptive and inward type in which the feeling of surprise or excitement is dominant and the signifying element more or less disappears; the second, an active and outward type which brings to the fore a creative, signifying interest and subordinates the receptive element. The expressive "wonderful" and the "ah!" of pure excited joy illustrate the first type of wonder-experience, whereas "wondering" in the active voice indicates the formative, intentional force that aims at putting into meaningful form the relative disorder of the emotional experience. In both types of wonder the experience, though sometimes painful, is positively valued; and this meaning, devoid of the suggestion of great excitement or curiosity, is what the word "wonderful" in the ordinary usage often conveys. Something excellent, of special value, is thus indicated. Whatever is wonderful, in the sense of extraordinary or ordinary experience, is in most cases indicated as good. One task of philosophy must be to find out more precisely and reliably just what makes the wonderful good.

Philosophy begins in wonder, but wonder begins in the child. And while philosophy in the full sense cannot be taught to the child, the philosopher who sets not just a professional but also a human value on wonder will be concerned about a society that inhibits wonder in the child and adult and thus inhibits that very reconstruction of society that is periodically called for. It may be that the inhibition of wonder carries with it the inhibition of feeling in general — compassion, commitment, indignation, aspiration — and the production of a conforming, less-than-free personality.

4. Curiosity: virtue or vice?

The philosophical exploration of my family⁷ of cognitively significant emotions has reached the stage where some central questions need to be addressed rather more directly. I have made occasional reference to human well-being. I want now to suggest that our capacities to experience interest, wonder, curiosity, and surprise are part of what is needed for its realization.

It is part of the good life for human beings to be concerned for the welfare of others; to be infused with a sense of something inspiring; to seek to discover something new; to be capable of being taken aback by the unusual. What is important for human well-being is that there is scope for the expression of these conditions, states or traits. In this respect, Baumgarten (2001: 169) observes

Recent philosophical interest in a more classical view of morality has led beyond an exclusive focus on actions to an exploration of virtues, vices, character traits, and the 'moral emotions.' Most attention has been paid to those virtues and vices that bear on our willingness to respond to the needs of others or to the impact of their actions on us; e.g., compassion, forgiveness, and greed. But if virtue theory is right that ethics should focus not just on the welfare of others but on 'self-perfection,' we should find valuable an exploration of any emotions or character traits that enhance or impede our ability to flourish as human beings, even apart from their social benefits.

Character traits are the psychological ingredients — processes or mechanisms — that define virtues or vices. Put differently, they are distinguishable routes to displaying one or another of the virtues. For example, the virtue of wisdom can be achieved through cultivating such traits as curiosity and love of learning, judgment, creativity, personal intelligence, and what we call perspective — having a 'big picture' on life. It would be a category mistake to ask if 'curiosity' causes 'wisdom.' Instead, curiosity, as I have shown, is an instance of a virtue category that revolves around knowledge and its use.

As has been amply documented in this paper, philosophers from antiquity onwards have tended to valorise wonder rather than curiosity. Opposing views have been taken by contemporary theorists concerning whether the experience of curiosity should itself be regarded as virtuous or vicious. The popular expressions, "idle curiosity" and "morbid curiosity," reflect a reasonable judgment that curiosity can be a vice when it is exercised inappropriately. Let us consider a well-known philosophical example of the latter: Leontius in *The Republic* berates himself after satisfying his curiosity to see a number of dead bodies.⁸ It is, then, evident that curiosity may be experienced at inappropriate times or in inappropriate ways.

In an attempt to deal with problematic occurrences Baumgarten (2001: 176) suggests that

...it may be that an improper exercise of the desire to know is *not truly* curiosity but something else, such as meddlesomeness, just as (following Aristotle) excessive fearlessness is not courage but foolhardiness and excessive loyalty to one's country is not patriotism but perhaps blind obedience or jingoism. The meaning of some character traits seems to include their wise exercise in this way...

The implication is evidently that there are occasions when a good person will not experience curiosity, will have trained herself not to experience it “too much,” or — since our control is neither absolute nor immediate — will choose to curb the experience whenever it emerges. For example, I might be curious about Saddam Hussein, but should I be one of the millions of people logged into YouTube who watched him die? The desecration of a body is almost universally taboo, and the veneration of one is a part of many cultural traditions.

Yet, even in the specific psychological research literature curiosity appears to be valorised — described by some as unequivocally good (e.g., Reio et al. 2006). It is credited with such disparate positive consequences as fostering academic success (Peters 1978) and facilitating healthy aging (Swan & Carmelli 1996). Though some psychological treatments of curiosity (e.g., Loewenstein 1994) are ambivalent in their approach, describing curiosity's potential for both beneficial and detrimental correlates, Seligman and Peterson (2004) devote little space to the possibility that curiosity may have the potential for harm, speculating that any undesirable behaviour motivated by curiosity may be the result of combining this strength of character with insufficient levels of conscientiousness or overexposure to inappropriate media. Reio et al. (2006: 131) give the topic of curiosity's possible vicious side even less attention, speaking only of the possibility that curiosity could be indulged in ways that “might be illegal or taboo.” Does this optimistic portrayal of a desire for knowledge do justice to the grotesque voyeurism that prompted over 237,000 recorded visits within three days to one of the websites that hosted the video of Nicholas Berg's beheading (Aylward 2004)? Similarly, viewing curiosity with unbalanced positivity does not adequately account for curiosity's role in such activities as childhood fire-setting and high-risk sexual behaviour (VanZile-Tamsen et al. 2006).

A contemporary theorist who *does* perceive curiosity as a vice is Gilbert Meilaender. Meilaender can conceive of curiosity as a virtue, but only when it fortifies a *particular kind* of engagement with the world. From his religious perspective, there is no intrinsic value in the process of questioning the world or in our autonomously shaping our form of engagement with it. Not only does questioning lack intrinsic value; it can be destructive because

...a desire to know certain things is incompatible with the receptive spirit which accepts the world from God and finds its limit in God (Meilaender 1984: 139).

Meilaender distinguishes between the virtue of curiosity and the vice of curiosity based on criteria such as the ends toward which the novelty-seeking behaviour is directed, our attitude toward the pursuit of knowledge, and the means by which that knowledge is acquired, all of which may be understood

in terms of their self-serving versus self-giving characteristics. Seeking knowledge out of a desire to better understand and appreciate creation is virtuous curiosity, while seeking knowledge to feel a self-inflating sense of power or to feed the belief in one's superiority over the less-informed is vicious curiosity. Seeking knowledge for the mere experience of sensory stimulation is an empty pleasure at best, a selfish demand to be amused at worst. It is a vice to regard certain forms of knowledge as legitimate topics for inquiry. Meilaender's examples (1984: 140) include curiosity about

...how my neighbor's wife performs in bed; how human beings respond to experiments harmful to their bodies, or even to suffering; how the development of a fertilized egg could be stimulated to produce a monster rather than a normal human being; how to preserve a human being alive forever. I may wonder, but it would be wrong to seek to know.

To seek such knowledge would require methods that violate and exploit others, making the operation of that form of curiosity incompatible with a self-sacrificial life.

This approach to the virtue and vice of curiosity provides clarity and coherence to explanations of the positive and negative outcomes of sensation-seeking. Hypotheses may be generated and tested, inspiring and guiding empirical research and demonstrating the heuristic value of this approach. Practical applications may acquire greater focus and benefit by specifically encouraging virtuous forms of curiosity. In addition, viewing curiosity as being either self-serving or self-sacrificial provides a balance not seen in some examinations of this trait.

As Baumgarten points out, this religious view shares with a more secular one the idea that some expressions of curiosity are appropriate and others are inappropriate. But the religious approach imposes stronger limitations based on an understanding of the world as given to us, a world, according to Meilaender, we neither possess nor control. As we have seen in the Leontius example, curiosity is inappropriate when the desire to learn about things may be debasing. It is not easy to formulate an account of what makes the desire to know certain things debasing. Meilaender's religious perspective may assist here by helping to spell out a concept of debasing curiosity, that which is *beneath* proper human inquiry. It also expands inappropriate curiosity to include a domain that is *above and beyond* proper human concern, and it suggests the possibility that both share a common flaw, a controlling and possessive spirit of curiosity that knows no limits, in contrast to a spirit of receptivity and humility. Baumgarten (2001: 180) points out that

The theme of human beings exceeding our proper role by searching for answers about things that should be left to God (or the gods) is a classic

one, going back to *Genesis*. It receives contemporary expression in debates about whether we should place limits on scientific research into areas such as human genetics. Human curiosity about our own genetic make-up and how it might be altered to our “advantage” is symbolic for many of human overreaching.

For Meilaender, a good person, one who loves the good, would choose to suppress her curiosity about areas that are properly out of bounds.

There is, however, another — in my opinion, decisive — aspect that has been overlooked, viz., that we are constrained by deep-lying anxieties and fears. At least for some of the time our ability and willingness to be curious may also be impeded by self-deception. According to Goldberg (2004: 335),

Self-deception — that which intimidates and abates our appetite for an exploration of our own nature — has among its many adverse consequences the circumvention of our capacity to know profound love, to engage in passionate and compassionate relationships, and to envision more noble and worthy values than those which were righteously installed in us. [He continues] Psychologists and philosophers appear to have unwittingly misled us in suggesting that the cause of self-delusion is due to our inattention, our ignoring what we already know, or our exercising irrationality in order to retain the psychological defences we have built up through our lives to bolster our feelings of self-esteem.

It seems to me that insufficient weight has been accorded the existential nature of self-inquiry which is required to meaningfully examine one’s proper participation in serious moral issues. Obtaining knowledge about *ourselves* may be the most difficult task we ever face; the great challenge of self-exploration is finding the *courage* to follow our personal journeys in search of our unacknowledged selves wherever and however they may lead us through the deep venues of our hearts and minds. Consequently, unconstrained curiosity about oneself is a crucial concern for every person who seeks increased self-understanding.

It may be that virtue is the capacity to look beyond the limitations of the moral values one has internalised and to envision a more compassionate and noble way of being with other people (cf. Goldberg 2004: 337). Without a reflective consciousness, as derived from personal curiosity, a person’s overriding need in the development of a constructive moral perspective remains undeveloped — to find within oneself positive qualities about oneself and one’s life and to use this recognition to establish one’s own identity in a self-enhanced way. As Goldberg (2004: 338) points out, “One cannot authentically love another without genuinely caring for oneself.” Curiosity, in its more inspirational sense, involves a courageous reflection about oneself and others. If we attempt, however provisionally, to

counter self-deception so as to grasp some of our limitations, to accept ourselves as less than perfect, we may hope to live to the best of our abilities.

5. Conclusion

As Wittgenstein would have it, there is a family resemblance and inevitable degree of overlap among the key concepts analysed in this paper. Nevertheless, drawing upon conceptual, historical, and empirical tools, I have attempted to elucidate certain connections that I hope may prove fruitful for further examination. My intention has been to provide a preliminary exploration of a family of cognitively significant emotions in general, while focusing upon the salient members, curiosity and wonder in particular. I began with an examination of the history of curiosity. Next, I analysed the meaning of the our current concept of curiosity together with concepts such as interest, wonder and surprise. Here my focus was on their relation to human nature and to the child. I investigated what it is about human beings that make us capable of curiosity, wonder and surprise and located them within the nexus of ordinary experience. Thereafter, I attempted to describe the components of curiosity, their inter-relations, the sub-types of curiosity and wonder, the conditions under which they arise, and some of the functions that they fulfil. Finally, I considered the relation of curiosity to human values, and assessed our evaluations of this salient cognitively significant emotion.

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1. The term "cognitive emotions" is used by Frijda (1986: 280) to denote "a separate class of emotions: attention, surprise, interest and curiosity." I propose the addition of 'wonder' to this list.

2. The following section owes a great deal in idea and formulation to Harrison 2001.

3. Aristotle 1947: 982b12–27. Plato, in Theatetus (1961: 155d), says, "This wonder is the mark of a philosopher. Philosophy indeed has no other origin." On the relation of wonder to curiosity see Daston and Park 1998: 303-328.

4. *Curiosity* and *interest* should not be lumped together as if there are no important differences between them. I shall examine linguistically significant differences in section 3. For the present, one might note that, according to Silvia (2006: 191), "People often use curiosity to refer to events that have yet to happen or knowledge they have yet to acquire. Interest, in contrast, is often used to refer to ongoing events or to describe events in the past. People say they are curious to see a new movie, but they say they found the movie interesting after having seen it" (His emphases).

5. Contemporary philosopher Jerome Miller (1992) views wonder as necessary for the kind of openness to reality that is needed in order to gain understanding. Hence, it does not just stay with the discovery or experience but opens out to something new and important that needs further inquiry.

6. The following discussion is from Baumgarten 2001: 173-174. He discusses the importance of curiosity for moral concern.

7. I employ the term "family" in Tomkins's sense. He (1962: 337-368) grouped interest, curiosity, enthusiasm, and attraction together within a single 'emotional family.'

8. Cf. Augustine (1991: 211) "What pleasure is to be found in looking at a mangled corpse, an experience which evokes revulsion? Yet wherever one is lying, people crowd around to be made sad and to turn pale."