PARADIGM SHIFT IN CURRICULUM DEVELOPMENT IN THE THIRD MILLENNIUM:
A BRIEF LOOK AT THE PHILOSOPHY OF DOUBT

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ABSTRACT
That a paradigm directs educational practices to pursue its basic assumptions is undeniable. Nevertheless, curriculum development in the 21st century has probably reached the edge of maturity. Now is the time to cynically reconceptualize the existing curriculum to raise new knowledge. In fact, to the present writers, the emergence of a new paradigm shift in curriculum development is not an ad hoc process. For a paradigm to shift, several factors get involved. In this regard, the paper with a cynical look on what happened in curriculum development intends to elicit the factors in charge of the shift in paradigms and cast light on our perceptions in the third millennium.

KEY WORDS: doubt, incommensurability, paradigm shift, progressivism, reconstructionism

INTRODUCTION
Curriculum development is seen as an ongoing process, rather than as an ad hoc event. The new millennium marks a moment when it is appropriate to think about what we have done, where we are now, and how we should plan for the future (Littlejohn, 1998). As Pring (2004) contends, we live in a time of change, and change, undeniably, affects the content of curriculum. However, new paradigms cannot keep coming forever (Craig, 1993). Furthermore, as Craig puts forth no change will occur if a paradigm in curriculum development is fully consistent with reality. In other words, if all educators in the related fields agree on the epistemology of an existing paradigm, no shift in paradigm is felt necessary. Accordingly, Craig asserts, to Khun (1970), a paradigm can only shift if it is wrong (not fully consistent with reality); if it is wrong, it will shift, as reality eventually will prove inconsistent with it. Thus, a paradigm which is fundamentally right cannot be shifted, only refined, as reality cannot fundamentally contradict it (Craig, 1993). Henceforth, to the present writers, a real paradigm is hard to grasp at the onset. From the first time that Einstein’s theory of relativity, for instance, was proposed, and it was hard to grasp, to the present time that nobody is found to provide solid evidence to reject it, Einstein’s theory becomes an indicator of the fact that a real paradigm shift never occurs in a vacuum.
In the history of curriculum development, many paradigms have emerged, but, from a relativist look, none can be compared with one another. Inspired by Kuhn’s (1970) incommensurability thesis, Antley (2010) puts forth that theories from different paradigms cannot be directly compared with one another because the conflicting assumptions underlying the paradigms are different. Still, the proponents of paradigm shifts are supposed to agree that at least one paradigm is indeed true: the paradigm of paradigm shifts. Nevertheless, the future is always uncertain (Rodgers, 2001), and it is not plausible to anticipate a paradigm shift in curriculum development. In this regard, Kuhn (1970) asserts that the direction of science is caused by doubt. Most change initiatives fail not because of a lack of vision but because people cannot come to an accurate and insightful view of reality. Rinpoche (cited in Larsen-Freeman, 2001) asserts that “our contemporary education, then, indoctrinates us in the glorification of doubt…; we have to be seen to doubt everything, to always point to what’s wrong and rarely to ask what is right or good” (pp. 5-6). This paper, from one side, concerning the philosophy of doubt, has a critical look at the nature of change in curriculum development in the 21st century. From another perspective, the paper is an attempt to investigate what makes a change in curriculum development, in particular, and in paradigms, in general. In sum, to the present writers, casting doubt upon the existing paradigms is not respected as an obstacle, but, as Rinpoche (2002) asserts, “a door to realization, and whenever doubt appeared in the mind, a seeker would welcome it as a means of going deeper into the truth” (p. 129).

NATURE OF CHANGE IN CURRICULUM DEVELOPMENT

Change seems to be an undisputable constant in curriculum development. The shift from second to third millennium thinking, as traced by Felix (2005), identifies a tangible shift from instructivist to constructivist pedagogy. Hadley (1998) holds that in the third millennium, “it is expected that the dominant ELT syllabus design will have returned full circle” (p. 67). That is, instead of offering new syllabi, it is predicted that scholars pondering on the available syllabi attempt to generate new knowledge.

There is no doubt that education is the most contested sector in any country. Both Platonist and anti-Platonist perspectives in education have undergone changes. For philosophers on the Platonist side who take a metaphysical approach, the pursuit of truth is vital, whereas for anti-Platonists who are non-metaphysical/materialist per se, there exist hidden desires for spiritual perfection. Furthermore, anti-Platonists share the view with materialists in that they are dependent upon bodies for their existence.

Along the same vein, there are a variety of factors that trace the shift from Platonism to anti-Platonism, but what is plausible is that power and politics often dictate which path in education will hold sway at any point in time in any part of the world. In this regard, in dissatisfaction with traditional education, constructivists/progressivists focus on the students’ interests and experiences rather than on the predetermined bodies of knowledge. What makes progressivists distinct from perennialists is that from progressivists’ perspective knowledge is not static, but dynamic, and student’s interests and needs are as important as the content to be learned. For Dewey (1933), a prominent figure in progressivism, the primary purpose of education is to get
people ready for a democratic life. In a democratic life, doubt and democracy are part and parcel of each other; henceforth, the absence of doubt diminishes the possibility of democracy (Hiley, 2006). In this way, as Hiley asserts, it can be claimed that progressivism relies on the tenets that doubt about traditional beliefs and distrust of authority were the foes of dogmatism and tyranny.

Similarly, dissatisfied with the progressive educationalists, radical educationalists, who stand on two camps of reconstructionists and critical theorists, claim that education should do more than prepare students for participatory democratic citizenship; to them education should also prepare students for deliberative citizenship. More specifically, to reconstructionists (e.g., Brameld, 1950), societal change can be achieved through education (Kilgour, 1995). In brief, dialogic democracy results in liberal democracy. Central to reconstructionists is the conviction that progressivists are too slow or too soft to lead to change in the existing social order. As to Uys and Gwele (2005), two distinct groups in the reconstructionist school of thought are the ideological and the methodological. Ideological reconstructionism places emphasis on theory development and advances reconstructionism as a philosophy of action in education. Methodological reconstructionists, in contrast, focus on advancing the application of research-based strategies for effecting social change in education. In sum, according to reconstructionists’ perspective, the purpose of education is to reconstruct society through students’ acquisition of problem-solving skills applied to real life. In the same line, students must be equipped with tools to do the process of reconstructing. In fact, a conscientizing and liberating curriculum, according to Uys and Gwele, is seen as most worthy of ensuring that education fulfils its purpose of changing the social order. Put another way, a utopian future, according to reconstructionists, is a realist wish and genuine possibility for human beings if we learn how to direct change and innovation.

In contrast, to the advocates of critical theorists (e.g., Freire, 1970; Giroux, 1988; Hooks, 1994), as Uys and Gwele (2005) conceive, the purpose of education is to enable students to become transformers of society. Transforming the society towards equality for all human beings will be achieved if the members of the given society are actively participating (Giroux, 1988; Hooks, 1994). With the transformation, a very different conception of privacy develops. Privacy becomes the place of individuality; the place where individuals are free to conduct their lives in their own ways; the survival of such individuality entails doubts. “Doubt about the validity of one’s convictions breeds relativism” (Hiley, 2007, p. 102). In fact, as Goldfarb (cited in Hiley, 2007) puts forth, “cynicism has its philosophical basis in relativism. When we no longer know that our way of life is the best way, [not only]we learn to respect others, but we also begin to doubt ourselves” (p. 24).

The movement from traditionalism to progressivism has not occurred as a step-by-step, additive process. In effect, the process of paradigm shifts is not a simple, mechanistic process. Instead, new paradigms emerge as a result of tradition shattering revolutions in the thinking of a particular professional community (Kuhn, 1970). Nevertheless, to Brown (2001), “the introduction of a new paradigm into an intellectual arena [is] similar to the diffusion of an innovation into a particular setting” (p. 109). The term diffusion refers to “the percentage of adopters who implement an innovation over a given period of time” (Kogers, cited in Markee, 2001, p. 122). Moreover, paradigms are chosen by those who use them rather than by those who produce them.
In this regard, Patton (1975) asserts that “paradigms are deeply embedded in the socialization of adherents and practitioners telling them what is important, what is legitimate, what is reasonable” (p. 9). Nevertheless, what obsessed our mind in this paper is to answer such questions as what factors cause such shifts in curriculum development, which shift is better, and was there a time without a paradigm shift?

**THE REASONS FOR A PARADIGM SHIFT**

Generally what causes a paradigm shift is the pressure of new evidence. But the question is how this evidence is manifested? The fact that reality emanates such evidence is not valid (Craig, 1993). Craig maintains that reality is inconsistent with theory. In other words, a theory cannot shift the fact of reality. Thus, scholars (e.g., Kuhn, 1970) appeal to doubt rather than reality. In effect, Kuhnian paradigm shifts are shifts inside the main body of science, and do not change life very much unless life itself becomes scientific, rational, etc.

Central to the tenets of Kuhnian paradigm shift, it can be asserted that when a paradigm in curriculum development is replaced by a new one, albeit through a complex social process, the new one is always better, not just different (Kuhn, 1970). This contention led to one of the most controversial themes raised by Kuhn—his thesis of incommensurability. That is, there is limiting communication between the competing theories since they lack a common measure and use different concepts and methods to address different problems. Still, in Kuhn’s philosophy, as Chen (1997) claims, there is an implicit incomparability between paradigms. To avoid criticism of relativism, Kuhn (1983) uses the term *untranslatability* rather than *incommensurability*. On elaborating his argument of untranslatability, Kuhn maintains that "most of the terms common to the two theories function the same way in both; their translation is simply homophonic. Only for a small subgroup of (usually interdefined) terms and for sentences containing them do problems of translatability arise" (pp. 670-71). “Incommensurability [, thus,] becomes untranslatability caused by the meaning change of a small group of terms” (Chen, 1997, p. 258).

Most attempts in the realm of curriculum development are complementary rather than contradictory by nature. There is not much space in this paper to discuss Kuhn’s thesis of incommensurability except to say, according to Kuhn (1970), paradigm shift is a sort of metamorphosis—a transformation. This transformation takes place not at the expense of losing the significance of old paradigms. Nevertheless, the most important reason for accepting a new paradigm is that it solves the anomalies that the old paradigm could not (Kuhn, 1970). In other words, as a normal science develops, a set of anomalies emerges that the existing paradigm fails to solve. Henceforth, the emergence of a new paradigm appears to be contradictory in respect to that given anomaly. In fact, the new paradigm, though better, has a complementary look at the previous paradigm.

Brown (2001), comparing the emergence of a new paradigm to the diffusion of innovation, refers to Rogers (1983) who examines variables affecting the rate at which innovations are adopted. In fact, diffusion is a type of communication “in which participants create and share information with one another in order to reach a mutual understanding” (Rogers, 1983, p. 5). Furthermore, to Rogers, there are five elements that contribute to the diffusion of innovation: *compatibility,*
relative advantage, complexity, observability, and triability. Rogers holds that compatibility of a new idea with current ideas or paradigms and with client needs (in this case, teacher and student needs) affects whether the new idea is adopted or not. Moreover, the compatibility of a new idea is in line with the relative advantage of that new idea, whether the new idea is better than the previous ones. The term complexity is self-explanatory, but paradoxical. From one side, complexity can be interpreted as the interconnectivity among the elements of a system (Larsen-Freeman, 1997). In a sense, the effectiveness of a system depends upon how well different parts of the system interconnect (Maftoon & Shakouri, 2013). From another perspective, it is the opposite of simplicity. Complexity, to Rogers (1983), means that if an idea is seen as being too complicated, it will not be adopted. Likewise, if an innovation is too complicated, its degree of visibility decreases; henceforth, another factor, to Rogers, that is conducive to the perception of innovation is observability, referring to how visible an innovation is. Also, consideration needs to be given to the triability of innovation. Triability, to Rogers (1983), is the degree to which an innovation may be experimented with on a limited basis. In sum, adoption becomes much easier if farmers, for instance, can try an innovation on a small scale. Likewise, Brown (2001) contends that if researchers can work with a new idea on a trial basis, they may lie more likely to adopt it.

Nevertheless, the term innovation in theory construction may make no sense since theories, as to Kuhn (1970), are not commensurate. Still, what “the diffusion of innovation emphasizes [is] the flow [and integration] of information […]” (Cooper, 1989, p.70). Newtonian physics, for example, is not comparable with Einstein’s physics, but Einstein’s physics findings can be integrated with Newton’s physics ones. In effect, the integration of flow of information can provide sufficient conditions for the emergence of a new paradigm. In a nutshell, although theories are not commensurate, innovations need to be integrated consistently to increase the performance capability of a new paradigm.

According to Kuhn (1970), paradigms are developed in an open-ended way that has nothing to do with rational choice or even awareness of progress. That is, there are no rational reasons for preferring one theory over another. To him, “aesthetic or subjective factors play an important role in a paradigm shift, since the new paradigm only solves a few but critical anomalies” (p. 74). In fact, theories compete rather than contradict one another. Those who decide to advocate a particular theory are not those who have made the theory, rather than those who use it. Henceforth, it seems implausible to claim that a new theory always emerges at the expense of marginalizing the findings of other theories. A multitude of theories can coexist. Each theory makes an endeavor to show reality from its own lens. Schumann (cited in Maftoon & Shakouri, 2012a), comparing two competing theories which can exist co-productively, asserts that SLA theories, including Krashen’s and McLaughlin’s, “can coexist as two different paintings of the language learning experience” (p.28). To Schumann, the two theories are respected as the reflection of reality, while symbolized in two different ways. Whether viewers have inclination towards Krashen’s theory or McLaughlin’s is quite aesthetic. That is, viewers interpret the paintings based on their Weltanschauungs; no one can claim which position is true as they are simply alternative representatives of reality.
Any history, per se, is subjective (Littlejohn, 2012), and the history of curriculum development is not an exception. It is a truism that in any subjective understanding of the world, there is a high amount of uncertainty and unpredictability. Thus, due to the uncertain nature of curriculum development, prediction is highly perilous. In this regard, Littlejohn (1998) asserts “predicting the future is always a hazardous business” (p. 3). In fact, innovations in the field of technologies and increasing global links turn the future into a much more uncertain and dynamic condition than ever before. In a sense, as Kozulin (2010) asserts, “educational systems are facing a paradoxical task of preparing students for future activities whose parameters are still unknown as the student is learning” (p. 384). Henceforth, it is plausible to claim that facing an uncertain period entails casting doubt on the ongoing practices so that curriculum developers can exert positive effects on the educational systems (Schechter, 2004).

ATTEMPT TO DISCARD CONFORMITY IN THE THIRD MILLENNIUM

In the history of language curriculum, we face two contrasting views: curriculum as facts and curriculum as practice (Young, 1998). In the former view, knowledge is considered as property that should be transmitted to an individual from an authority (Maftoon & Shakouri, 2012b). In contrast, the basic premise of the view of curriculum as practice centers on “how knowledge is produced by people acting collectively” (Young, 1998, p. 27). In fact, curriculum developers in the third millennium are not in favor of transmitting a set of facts to the students. Henceforth, postmodernist educators, as Marsh (2005) claims, insist that teachers and students should reflect upon events of the present and how they provide access to the future.

In fact, as Felix (2005) maintains, success is based on how well students learn as individuals and work together as a team. For this to occur, it is a felt need that curriculum developers should make an attempt towards cooperative learning founded on constructivist epistemology. According to Hassaskhah (2005), two critical features of such an epistemology are positive interdependence and individual accountability. These two features of constructivist epistemology are mutually intertwined. Felix believes that there are three ways to increase the sense of accountability among students: (1) materials interdependence, i.e., providing materials that could be shared, (2) task interdependence, i.e., fostering group cohesion by assigning different members of a team a piece of material that could be shared, and (3) goal interdependence—assigning a small part of each student’s course grade improves the students’ performance.

Interdependency will not be achieved until one does not base his/her perspective on conformity. Conformity is the extent to which human beings are willing to adhere to behavior pattern of a particular group (Asch, 1955). However, as Chernus (1992) insists, supporting mindless conformity can put an end to diversity. Chernus further asserts that if we impose our experience on others in order to achieve conformity, we certainly close our eyes to many new experiences and become narrow-minded. Thus, when interdependency becomes possible, conformity diminishes. Postmodernism argues that the image of totality observed in modernism is not simply false but dangerous since it results in conformity. In this regard, Hadely (1998) asserts that instead of searching for the latest teaching techniques or the most recent discoveries, we should be aware of the cyclic trends taking place and reflects upon our own beliefs as educators. What
postmodernists claim is that human beings are free from the pressure for conformity; they are more in touch with the way things really are (Chernus, 1992).

However, achieving conformity among human beings about what to do in order to achieve a goal is appreciated. Along the same line, it can be suggested that it is important to re-describe inquiry (Reason, 2003). Re-describing, according to Rorty (cited in Reason, 2003), refers to “a talent for speaking differently, rather than for arguing well as the chief instrument for cultural change” (p. 105). In fact, as to Rorty, the goal of inquiry is not seeking for truth. Instead, the purpose of inquiry is to achieve unanimity among human beings about what to do in order to achieve a goal. Hence, great importance should be attached to developing a talent for speaking differently and articulating what should be done with new metaphors. In effect, as Cavagnini (2012) declares, according to Rorty, inspired by Kuhn’s thesis of incommensurability, any revolution in theory construction is simply a matter of changing the terminology. To Cavagnini, confining oneself to a fixed, predetermined category leads to intellectual, cultural, and personal stagnation. What scholars, therefore, should do in the third millennium is re-describing vocabularies.

Inspired by Klein (cited in Ortega, 2013) who claims that second language acquisition has reached maturity in the 25 years of disciplinary existence, we see a shift in the inclination of scholars (e.g., Ortega, 2013) in the 21st century towards transdisciplinarity. In this regard, it can be claimed that in line with Reason (2003), who insists inquiry has to be redescribed, it is time to ponder on disciplinary achievement that might be conducive to raising new knowledge. By re-describing, we do not mean that the same terminologies employed by our predecessors to be used in our argument; however, to achieve agreement it is indispensible to have a complementary look on what is suggested. This complementary look entails that scholars should avoid proposing syncretistic recollection of old vocabulary. Furthermore, success in transdisciplinarity is deeply rooted in cynical attitudes towards disciplinary achievement because progress will not achieve if we move in line with solid reality. As Goldfarb (cited in Hiley, 2006) argues, “cynicism in our world is a form of legitimization through disbelief” (p. 30). Moreover, the notion of cynicism needs to be revisited; a cynic should not be viewed as one refuting “facts without evidence” (Mihailidis, 2008, p. 171). However, sowing seeds of reasonable doubt about the value-systems of our education is worthy of attention. In this regard, Sim (2006) claims that societies get healthy when doubt is an integral part of their value-systems. Doubt, as a value of society, should be celebrated since cynicism contributes to the reliability of our beliefs system (Hiley, 2006). In sum, cynicism resonates with our belief that shifting in a paradigm entails casting doubts on the contemporary issues, in general, and disciplinary achievement, in particular.

CONCLUSION
The wry observation made by the great British scientist—Huxley (1870): “the great tragedy of science: the slaying of a beautiful theory by an ugly fact” (cited in Lashway, 2001, p. 1) applies plausibly to the thesis of the present paper that the emergence of a new paradigm shift is not an ad hoc process; furthermore, if any available paradigm in a system is consistent with reality, no paradigm shift occurs. In a sense, when our beliefs system appears to cast doubts on the existing
paradigm, the emergence of a new paradigm can be expected. However, it is irrational to reject any new fact simply because it is not integrated with our past knowledge.

Shifting paradigms in curriculum development is a difficult task. As Brown (2001) claims, individuals who have completed their own professional preparation under one paradigm may not see a reason to shift. Even if they wish a shift in their ideology, they face several limitations on their way. Accordingly, Brown claims that there are at least five possible impediments to any paradigm shift or curricular innovation: amount of time, background schemata, text availability and level of difficulty, material availability, and workshop availability for methods instructors. Tollefson (cited in Brown, 2001), also, puts forth that the intellectual beliefs system an individual might adhere to is often not seen as a set of lenses; that is, individuals may hold to particular ideologies without even recognizing that there is something subjective about these ideologies. Thus, before any shift in ideologies comes about, the first step must be to recognize and name the paradigm to which one has been intellectually socialized. However, in a context (e.g., China) that people are greatly influenced and socialized by their cultural ideologies (e.g., Confucian tradition in China), shifts on the trends of old paradigm appear impossible (Reid, 2002, cited in Yan, 2006). Thus, a paradigm shift does not occur cumulatively, and very occasionally, the dominant paradigm is overturned, but when a paradigm shift comes up, the new paradigm shift will dictate the re-conceptualization of everything that had come before.

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