Fiction, Science, or Faith – The structure of scientific revolution: A planners perspective. Another visit to Thomas S. Kuhn: The structure of scientific revolutions.

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Thomas S. Kuhn: The structure of Scientific Revolutions
Space, this is the voyage of the Star Ship Enterprise ‘to boldly go where no man has gone before’. (Tag line of the original and series of Star Trek debut 1966.) For three years, the show suggested shifts in thinking, paradigm shift in its truest sense. Kuhn in his essay ‘The structure of scientific revolutions’ is not science fiction but predispositions on how we do science. Like the fictional, Kuhn's work argues that the normal encompasses the customary, but when we abandon the norm and go places undiscovered, analogously are shifts in thinking and new paradigms (Kuhn 34).

Thomas Kuhn, lived from 1922 to 1996. He saw the first hand the depression, World War II, and began his preliminary formation of this work during the Korean and culminated the work around the time of the United States entry into Vietnam (Thomas Kuhn http://www.des.emory.edu/mfp/kuhnsnap.html). Therefore, Kuhn experience first hand scientific revolution in the development of the atomic bomb and its revolutionary social implications in that the instruments of war embarked on a power sufficiently dynamic that once unleashed, the Japanese’s surrendered the same day of the final bombing (Burr, 2005). Other changes that likely motivated Kuhn’s thinking include the social revolution in India with Gandhi, Pan Africanism, the civil rights debates in the United States, and the rise of social non-conformity in the early sixties. With such a backdrop, Kuhn apparently used the resources provided by the ‘Society of Fellows of Harvard’ and developed a ‘gestalt’, which describes both scientific and social change (Dabbagh, 1999).

The work which emanated from the years of inquisition and questioning demonstrated the various influences and even support the basic ideas of his work the ‘Structure of Scientific Revolutions’ that makes the case on building science from existing science with new meaning.
The overall and overarching claim of the text supports the notion for change and exemplifies the challenges at all levels of society. Kuhn’s arguments are sufficiently broad to encourage what he considers normal or pure science, sociological and behavioral sciences to anticipate the steps towards change.

Kuhn challenges the reader, almost lulls the reader concerning the conformity of normal science, the press for uniformity, consistency and order. Not simply order of scientific consideration but total order in methodology, application, answers and questions (Kuhn, 1962 25). The rigidity of normal science becomes vulnerable when rules do not work or debate over methods or questions in approach arises, such is the beginning of scientific revolution, not just scientific but likely in any area that has established standards and rules (48). The idea of change, drastic change are relevant for planners in that the various socio-economic issues before our communities needs creativity beyond ‘that’s how things has always been’ and anecdotal responses like ‘you know how those people are’. The argument is that change can take place in any given scenario and time, planners may have to press into that change and not accept the status quo.

The word resistance takes on new meaning in the context of normal science (existing social structures) in the face of change. For example, ethnic diversification of the Houston metro may require structural changes, pressing on without giving meaningful consideration to the new demographic of the city is such that the ethnic majority may not hold in places of limited power.

The crisis in thinking and reality of anomalies are indicators in the face of normal science. The preponderance of the latter elements eventually takes root and the door to change. The resultant effect for normal science during this time is some degree of chaos and re-
alignments. That resistance to change becomes more stated with opposition and the existing exemplar begins to show flaws.

Hopefully, planners and public officials are not overcome by a sea of dissatisfaction due to unwillingness to observe our socio-economic challenges where the military language of Kuhn becomes a reality in our cities. The dissatisfied unite for the ‘ensuing battle’, after taking stock of the demographic changes by ‘view of the field’, and find, due to the numbers those that now rule ‘surrendered with ease’ (84, 85, 87), each term presents a point of resistance or pending change. The latter is a play of words but they hold some degree of reality. The context of the play on words might agree with Kuhn’s notion that the young and or new to the field are the ones that usher in change (90). The histories of unwillingness to respond to social conditions, have and have not, and passing down not just oral histories but observation may cause many to rise to a place of non-conformity and radicalism.

Kuhn presents and describes the case for the taking hold of a paradigm. It depicts total change and not one of three varieties, two of which describe normal science at different stages but only one that ultimately give rise to revolution since the other two cannot assimilate the pending revolution (97). In order to exemplify the case Kuhn provides a directed definition of paradigm (103). The definition offers a stark distinction in focus between the paradigm and shift, and as such when one considers social change most often its continued paradigm building and not the type of revolutionary outcomes possible when a shift takes place (115).

The specific reality of a paradigm shift still labors the readers’ conceptualization of the total undoing Kuhn wants us to ascribe. Kuhn’s notion of change and revolution is well defined in the New King James Version of the bible ‘if anyone is in Christ, he is a new creation’ this phrase references the mind of the scientist “old things have passed away. All things have become
new” (2 Cor. 5:17), the final phrase speaks to a new world, which corresponds to Kuhn (115, 121, 129, 135). Biblical change meets the criteria of a paradigm shift, the result is totally new and not simply a rehashing of the old ways.

The unintended relationship with New Testament theology and paradigm shift again is evident with Kuhn notion of the scientist having faith. Faith is not an empirical application scientist normally attests, but Kuhn promotes it during the transition from the old to the new (158). The implication from Kuhn is the old paradigm has sufficient flaws, inconsistencies and internal crisis that the pending change depends on the scientific community faith “the substance of things hoped for” (Heb 11:1).

Even though Kuhn offer a way to keep the existing paradigm, giving consideration to our social structures one will have to support the idea of a complete shift if one must take place at all, it’s something like the old social doctrine of ‘separate but equal’. The analogy again from King James fits the strong position of change from one to the other “no one pours new wine in old wine skins” (Luke 5:37). The point is, the old skin will fall apart and the wine will waste, as in a paradigm shift one must replace the other.

The continued press for scientific growth may lie in the knowledge that science does not know all things and there are still many questions and realizations yet to be known, the same likely holds for the field of planning. The argument has been made for the priority of normal science and its push to retain consistency both in principles and methodologies used as accepted norms and behaviors. Inevitably, the normal science community or any other community tends to press to operate within four general principles presented by Kuhn, symbolic generalizations, beliefs, values, and the exemplars or paradigms (182, 184, 186). It is through the latter frameworks communities in the broadest sense operates.
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Does Kuhn descriptive analysis of paradigm shift offer planners a place to strive in building an identity? Such is necessary based on the logic that before any shift takes place the existing generalizations are sufficiently strong that the fields’ survival is not threatened by change. If the profession can agree that its central theme and purposes are sufficiently grounded, maybe paradigm shift is possible. Uncertainty in the purposes of and for planning, both academic and professional, substantiates thinking of Rosenberg’s argument; which holds that it may be necessary to fully promote the methodologies that define the craft before we look to change it (Rosenberg 2000). The perception and potential derived from paradigm and the shift depends on clarity of the original exemplars. The notions presented by Kuhn leaves open the idea for creativity in the midst of rigidity. The rigidity in the case of planning is the short history founded upon the relationship with public health and its constitutional tie to due process and equal protection under the law. It’s possible that the rigidity is sufficiently strong to withstand future change.

Kuhn’s argument for paradigm shift is grounded in a set of standards that are a basis for existence. Is planning sufficiently grounded to even consider a new paradigm or must we simply continue to add schools of thinking, without sacrifice of any. A shift requires an existing paradigm. The profession must continue to build its history even before the 1890’s, the beginning ascribed to the profession by many. Kuhn work does not promote the total demise of ‘normal science’ but promotes the importance of a base of understanding from those within the community (127).

According to Senge et al., using reflective story telling, we can even look deep into history beyond the Greeks and even into theological writings to find the rich fabric of planning not part of our current thinking (1999, 459). We must recognize all that is to be known is not yet,
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and a view of planning histories normally left untold will provide a deeper historical perspective and understanding that may lead us into a future that offers opportunities for true revolution. In respect to the current community of planners our challenge is resisting conformity, appreciating diversity, affirmation of our long history, build upon what’s good, and strive to eradicate what holds us perceptually always seeking a new buzzword while at the same time missing out on the simplest of truths in our profession ‘we the people’* and their the challenge in realizing full potential.
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References:


Heb. 11:1 (New King James Version)


Luke 5:37 (New King James Version)


Thomas Kuhn, Retrieved March 6, 2007, from: http://www.des.emory.edu/mfp/kuhnsnap.html

2 Cor. 5:17 (New King James Version)

U.S. Constitution and almost every other state constitution pre-amble.