Epistemological Explanation of Lean Construction

The Toyota production system, on which lean production is based, emerged as the unplanned result of unrelated improvements and innovations. Although the related practices and principles are now widely reported, the theories and philosophical premises underlying lean production are not commonly known. This also applies to lean construction, which, although it originated as a set of countermeasures to specific problems in construction, has more recently evolved in alignment with lean production. For example, there is a stark but unexplained contradiction between lean and traditional construction management models regarding the importance of learning and improvement. In view of this, the aim here is to determine the epistemological orientation in these two models. It is found that two different starting points for epistemology, Platonism and Aristotelianism, have also played a major role in the formation of the fundamental ideas of engineering and management generally and in construction. An overly Platonic influence on engineering and management has created a number of problems. It is contended that one major explanation for the evident benefits of lean construction is related to its Aristotelian epistemology.