

A Spatial Turn in Business: Utilizing Function-Based Spatiality

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Abstract

Organizations have implicitly long understood the significance of location, but lack a comprehensive theoretical system to describe and analyze its importance. This short theoretical paper seeks to locate the significance of space within organizational theory and employs the ideas of complex adaptive systems to show the nested systems in which location can be considered. Through acknowledging the historically derived functions of space, the influence of location within the organizational system becomes clearer. Therefore, the concept of function-based spatiality provides an analytical framework with which the significance of location is factored into system organization.

The spatial aspects of organizational theories, specifically focusing on how the functions of entities within their local, regional, national, and global contexts interact with elements such as the labor, types of industry, goods produced and markets to which goods are sold must be better understood. Many models of organizational theory fail to take into account the historical synergies of the spaces in which the organizations exist. In an attempt to understand the organizational networks within institutions and systems I utilize complex adaptive system theory to view each as a set of organizations acting within multiple spheres. Within each sphere the organizations serve specific functions, and it is through complimentary interactions with these functions that businesses are able to see the greatest success. Conversely, an entity that unknowingly seeks to either change the functions or fails to positively interact with these functions will struggle.

In developing my approach I owe much to scholarship on institutional and organizational theory. W. Richard Scott provides an overview of institutional theory from which to begin. In Scott's overview the Historical School is discussed as an early approach. The institutional economists, Thorstein Veblen, John Commons, and Westley Mitchell all embraced the idea that historical precedents and change over time as economic principles. Indeed,

To Commons, the institutions existing at a specific time represent nothing more than imperfect and pragmatic solutions to reconcile past conflicts; they are solutions that consist of a set of rights and duties, an authority for enforcing them, and some degree of adherence to collective norms of prudent reasonable behavior.¹

Although the Historical School has not become the predominant perspective due to the criticism that it overemphasizes the uniqueness of each institution and system, disallowing general theories applicable across circumstances, it remains a viable and important model. Scott's view of institutional theory as addressing the entirety of the organization and its environment is evidenced in his citation of Charles Perrow: "For institutional analysis, the injunction is to analyze the whole organization.

¹ SCOTT, W. R. 2008. *Institutions and organizations : ideas and interests*, Los Angeles, Sage Publications. P 3.

To see it as a whole is to do justice to its "organic" character. Specific processes are, of course, analyzed in detail, but it is the nesting of these processes into the whole that gives them meaning."² Scott explains that "The battle between the particular and the general, between the temporal and the timeless, is one that contemporary institutional theorists continue to confront."³ Within Scott's writings this is juxtaposed against organizational theory which has a narrower focus on particular organizations to solve problems, maximize efficiency and productivity, and meet the needs of shareholders. While similar in many aspects, institutional theory is broader in scope, including multiple organizations, while organizational theory has a narrower focus. The challenge then, is to either adopt theories specific to time and place, or to continue seeking universal theories applicable to institutions and organizations.

The idea that organizational theory is nested within institutional theory can be expressed in a variety of ways. Karen Newman, in exploring organizational behavior in Central and Eastern Europe notes the correlation between environment and behaviors.⁴ This school of thought posits that organizational behavior is dependent on the environment in which it operates. Marvin Washington and Marc Ventresca take this a step further moving from a spatial definition of environment to a systematic view to show how specific institutional mechanisms guide organizational change in university sports.⁵ The authors argue prior research typically places institutional frameworks as barriers against change, whereas their study shows that mechanisms within the institutional frameworks can actually act as facilitators for organizational development. This is in general agreement with Paul DiMaggio and Walter Powell, who question the iron cage of rationalism proposed by Max Weber and reinforced by structuralism as defined by Anthony Giddens.⁶ DiMaggio notes that rather than inherent structural laws, organizational behaviors are primary determinants. Research by P Devereaux Jennings and Paul Zandbergen shows the nesting of organizations into institutions, and then into systems well with their discussion of institutional theory as adopted by "green" organizations.⁷ By approaching both the institutional and organizational frameworks, Jennings and Zandbergen connect the different levels of analysis necessary for big picture analysis.

Recently, there has been an increase in research into organizational theory within the sphere of institutions. Joseph Mahoney breaks down organizational theories into the categories of Behavioral Theory, Transaction Costs Theory, Property Rights Theory, Agency Theory, and Resource-Based Theory with the purpose of explaining these fundamental building blocks.⁸ In stating that further research should show interconnectivity between these models, Mahoney is implicitly calling for an overarching model under which multiple theories can exist. Michael Lounsbury and Mary Ann Glynn add to the theoretical discussion within the field of entrepreneurship in discussing the significance of culture to the organization.⁹ They argue that the two components of cultural capital, firm-specific and institutionally-wide, bridge the gap between organizational and institutional behaviors. This seems to be overstepping in its institutional assertions however. As a cautionary piece, Frank Schmidlein notes the danger of organizational behaviors steering the development of institutional theory.¹⁰ With organizational theory being dependent on a plethora of local variables, the question of connections between institutional and organizational theory becomes increasingly complex.

From a number of perspectives, overarching views of institutional theory have developed. These "open-systems" all offer models that can encompass the organizational theories nested within.

² SCOTT, R. W. 1987. The Adolescence of Institutional Theory. *Administrative Science*, 32, 493-511. P 494.

³ SCOTT, W. R. 2008. *Institutions and organizations : ideas and interests*, Los Angeles, Sage Publications. P 5.

⁴ NEWMAN, K. L. 2000. Organizational Transformation during Institutional Upheaval. *The Academy of Management Review*, 25, 602-619.

⁵ WASHINGTON, M. & VENTRESCA, M. J. 2004. How Organizations Change: The Role of Institutional Support Mechanisms in the Incorporation of Higher Education Visibility Strategies, 1874-1995. *Organizational Science*, 15, 82-97.

⁶ DIMAGGIO, P. J. & POWELL, W. W. 1983. The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review*, 48, 147-160.

⁷ JENNINGS, P. D. & ZANDBERGEN, P. A. 1995. Ecologically Sustainable Organizations: An Institutional Approach. *The Academy of Management Review*, 20, 1015-1052.

⁸ MAHONEY, J. T. 2005. *Economic foundations of strategy*, Thousand Oaks, CA, Sage.

⁹ LOUNSBURY, M. & GLYNN, M. A. 2001. Cultural Entrepreneurship: Stories, Legitimacy, and the Acquisition of Resources. *Strategic Management Journal*, 22, 545-564.

¹⁰ SCHMIDTLEIN, F. A. 1999. Common Assumptions about Organizations that Mislead Institutional Researchers and Their Clients. *Research in Higher Education*, 40, 571-587.

Models based on evolutionary thought are the largest segment of organizational theory and have been discussed for over two decades.¹¹ Recently, Adrian Bejan's Constructal Law, is one such contribution. Moving beyond theory to the statement of a natural law, Bejan seeks to show that all organizations, whether they be organic, social, or economic, evolve following a specific set of parameters.¹² Systems of rivers, trees, lungs, and corporations are all designed according to the principles of optimizing flow. According to Bejan, these designs are not the product of a grand designer, but the result of a natural law whereby all systems evolve to reduce friction and maximize flow. In this way, design theory acts as the umbrella under which organizational and institutional theory develops. The critique of Constructal Law is its inability to define direction of flow and adequately address persistent and often increasing barriers to optimal flow designs. While it makes perfect sense in a situation without resistance, it fails to address the causes of resistance.

Another "open system" model through which to see the summation of organizational theory has been conceptualized by Nobel Laureate, Murray Gell-Mann for his investigation in quantum physics, the ideas of complex adaptive systems theory have been furthered in both the hard sciences and social sciences by Robert Axelrod, Joshua Epstein, and John Holland among others.¹³ The principle organization committed to research on Complex Adaptive Systems Theory (CAST) is the Santa Fe Institute, with schools such as Gonzaga University utilizing the theoretical model in its nursing program. In business, Holland utilizes an inquiry into supply economics to introduce Adaptive System Theory. Recharacterizing Adam Smith's "invisible hand" with adaptive systems Holland makes the case that both economic systems, and human auto-immune systems follow basic principles of system dynamics.¹⁴ His decade-old discussion of adaptive systems has been supplemented by J Stephen Lansing who aptly reinforces the need for the overarching theoretical model. He writes, "if we shift our attention from the causal forces at work on individual elements to the behavior of the system as a whole, global patterns of behavior may become apparent."¹⁵ In the field of Leadership Studies, Marguerite Schneider and Mark Somers have challenged the General Systems model put forth by Daniel Katz and Robert Khan through employing CAST.¹⁶ Indeed, many scholars are beginning to connect the model to business and in 2011 the Harvard Business Review included an interview with Michael Mauboussin that detailed the growing significance of the theory within the business community.¹⁷

From the utilization of CAST as the umbrella for supplementary models, inspection of specific organizations necessitates complementary theoretical structures. Many of the organizational theories previously discussed do indeed work within the CAST model. To understand the spatial implications of organizational behavior the model of business clusters, presented by Michael Porter can act as a starting point.¹⁸ However, as seen in more recent scholarship, there is much left to be done as Porter's analysis is based on static assumptions of the business environment.¹⁹ This is especially true of spatial analysis. As seen in Newman's research, the upheavals in national institutions acted as an inhibitor to organizational development.²⁰ Spatially, the nation is often viewed as the narrowest focus of institutional models, although regional comparisons are not infrequent.²¹

¹¹ Baum, Joel, & Singh, Jitendra V. 1994. *Evolutionary Dynamics of Organizations*. New York: Oxford University Press

¹² BEJAN, A. & ZANE, J. P. 2012. *Design in Nature: How the Constructal Law Governs Evolution in Biology, Physics, Technology, and Social Organization*, New York, Doubleday.

¹³ AXELROD, R. M. & COHEN, M. D. 1999. *Harnessing complexity : organizational implications of a scientific frontier*, New York, Free Press.

¹⁴ HOLLAND, J. H. 1995. *Hidden Order: How Adaptation Builds Complexity*, Reading, MA, Addison-Wesley.

¹⁵ LANSING, J. S. 2003. Adaptive Systems. *Annual Review of Anthropology*, 32, 183-204. P 185.

¹⁶ SCHNEIDER, M. & SOMERS, M. 2006. Organizations as Complex Adaptive Systems: Implications of Complexity Theory for Leadership Research. *The Leadership Quarterly*, 17, 351-365.

¹⁷ SULLIVAN, T. 2011. Embracing Complexity: An Interview with Michael J. Mauboussin. *The Magazine*. September 2011 ed. Cambridge, MA: Harvard Business Review.

¹⁸ PORTER, M. E. 1990. *The Competitive Advantage of Nations*, New York, NY, Free Press.

¹⁹ BENNETT, R. J., GRAHAM, D. J. & BRATTON, W. 1999. The Location and Concentration of Businesses in Britain: Business Clusters, Business Services, Market Coverage and Local Economic Development. *Transactions of the Institute of British Geographers*, 24, 393-420.

²⁰ NEWMAN, K. L. 2000. Organizational Transformation during Institutional Upheaval. *The Academy of Management Review*, 25, 602-619. P 602.

²¹ BRUTON, G. D., AHLSTROM, D. & PUKY, T. 2009. Institutional differences and the Development of Entrepreneurial Ventures: A Comparison of the Venture Capital Industries in Latin America and Asia. *Journal of International Business Studies*, 40, 762-778. is an example of regional comparisons.

The comparison of Japanese systems of corporate governance and the Anglo-American model is one example of institutional theory seen through the spatial lens of nation states.²² In the same vein, a comparison of similar human resource policies instituted in Russia, Finland and the United States found a wide disparity in initiation.²³ Hugo Radice even goes as far as differentiating economic systems on national scales in a comparative analysis.²⁴ Unfortunately, the national scale is far too broad a stage for the types of spatial analysis that allow for useful models.

The research of Ryan Orr and W. Richard Scott presents a selection of international case studies highlighting miscommunications and other mistakes that go against institutional insights.²⁵ Their purpose is to show the outliers which seem to persist within the context of global business, however, if CAST is applied and rather than limiting theoretical models to national scales, one observes the local context, many of the missteps noted could have been avoided. This seems obvious since few scholars would surmise that policies of Washington DC are uniformly applied in cities as diverse as Orlando, Florida and Bismarck, North Dakota. Simply put, as Orr and Scott begin their study, "When you hear hoof beats think Horses, not Zebras - unless you're in Africa."²⁶ Place matters; not only in what can be brought to the place, but what the place brings to the organization. AnnaLee Saxenian's comparison of Boston and Silicon Valley provides insights into the ways location can provide competitive advantages.²⁷ In Saxenian's analysis, regional networks provide the key for differences between the two regions. While network analysis provides valuable insight, it can be explained as a theoretical model by understanding the factors that guide development of regional networks. A basis for this model, completely congruent with the overarching CAST has roots in Structural Functionalism, as defined by Ruth Spencer. The classical portrayal of functionalism posits the different organizations as working towards a common goal within a single scale. In research on migrant development in urban environments, there many groups and organizations of the city that are actually quite unharmonious, and have different functions depending on whether they were interacting with the local, regional, national, or global spheres.²⁸ The concept of function-based spatiality, wherein the nested functions of local, regional, national, and international systems are interwoven into the spatial fabric provides a model through which CAST can be applied on a useful scale.

Function-based spatiality posits that each space, be it urban or rural, has specific functions relative to the regional, national, and even international spheres. In understanding the functions of spaces, and their dynamics of interaction, successful managers can apply utilize these historically developed functions rather than pushing against them. An example of the usefulness of function-based spatiality can be observed in Abelli's case of Mountain Man Brewing.²⁹ The case revolves around the question of cannibalization costs should the fictitious Mountain Man Brewing Company produce a light beer in addition to its lager. Abelli provides valuable information about the market and the projected shifts in consumption. As an element of this description, she describes the company as a regional brewery in West Virginia that has expanded into the Ohio, Indiana, Illinois and Michigan markets. There is detailed information showing the brand connection with a blue collar mining community and ample question of how a light beer would fare in such a market. Unfortunately however, there is no spatial analysis that can provide valuable insight.

²² YOSHIKAWA, T., TSUI-AUCH, L. S. & MCGUIRE, J. 2007. Corporate Governance Reform as Institutional Innovation: The Case of Japan. *Organizational Science*, 18, 973-988.

²³ BJÖRKMAN, I., FEY, C. F. & PARK, H. J. 2007. Institutional Theory and MNC Subsidiary HRM Practices: Evidence from a Three-Country Study. *Journal of International Business Studies*, 38, 430-446.

²⁴ RADICE, H. 2000. Globalization and National Capitalisms: Theorizing Convergence and Differentiation. *Review of International Political Economy*, 7, 719-742.

²⁵ ORR, R. J. & SCOTT, R. W. 2008. Institutional Exceptions on Global Projects: A Process Model. *Journal of International Business Studies*, 39, 562-588.

²⁶ Ibid. P 562.

²⁷ Saxenian, AnnaLee. 1996. Inside-Out: Regional Networks and Industrial Adaptation in Silicon Valley and Route 128. *Cityscape*, 2(2): 41-60.

²⁸ RANDE, D. 2007. Koreans in Japan: Urban Settings and Immigrant Labor. In: HUTCHISON, R. & KRASE, J. (eds.) *Ethnic Landscapes in an Urban World*. Amsterdam, The Netherlands: Elsevier, JAI.

²⁹ ABELLI, H. 2007. *Mountain Man Brewing Company: Bringing the Brand to Light "Case #: 2069"*, Boston, MA, Harvard Business School.

Function-based spatiality can be utilized to see how the coal-mining functions of western West Virginia have influenced the development and distribution of the product. Abelli even notes that it is “West Virginia’s beer.”³⁰

Understanding spatial functions beyond the artificial boundaries of nation, or in this case state, can provide much more assistance. In Abelli’s case, the connection between brand and locale is established, but there are multiple spheres in which West Virginia operates. Noting that sales have expanded west, to Ohio and Indiana provides clues to the regions, and functions associated with the brand. The function of the region as connected to the independent, energy producing, blue-collar worker is certainly evidenced in the case. Unsaid, but implied by the decline in sales are the slowly shifting functions towards more urban white-collar workers. On simply the economic scale the dichotomy is apparent, but there are multiple scales and layers to function-based spatiality. As “West Virginia’s beer,” is there a function of state identity and affiliation with a possibly imagined heritage? West Virginia has several functions and connecting the new product with an alternative function negates much of the original fear of cannibalization. Spatially, this is easy to observe in this case. While the original product was connected to the blue-collar functions of the coal miners, the new light beer can be connected to the white-collar urban workers. Both obviously build upon the idea of “West Virginia’s beer,” but spatially, the new product could be rolled out in markets like Martinsburg or Harpers’ Ferry. These communities, with strong state pride, are home to people commuting to Washington DC. The case suggests the only new course of action is to directly compete with the functions of the space, in selling a product that challenges historically developed spatial functions. Understanding the multiple functions, and spatial characteristics of West Virginia, and the market, allows for the utilization of different functions which opens new markets without challenging existing ones.

Marketing and product development is but one area where function-based spatiality can provide benefits. Evaluating the historically developed functions of urban areas can be helpful in determining labor practices. Traditionally, Tokyo was a city of samurai who were required to spend part of their time in the city and the remainder back in their home province. This alternate attendance system of 150 years ago has left an imprint on today’s labor with both the practice of dormitories for salarymen and a high reliance on temporary labor. This can be juxtaposed against the system of Osaka which historically valued long contracts and permanent residence. Managers who understand the differing functions of the two cities will be much more effective than those who do not.

Scholars like Saskia Sassen, and Alejandro Portes, have done much to connect urban studies and the city to the study of business.³¹ Their explorations of the global city and regional networks have provided many insights into the role of the city in business decisions. Incorporating these ideas into the function-based spatiality framework allows for the cities to be viewed in not only the context of global trade, but connects that trade to national, regional, and local functions. Additionally, Portes has begun the exploration of economic determinants on migrants.³² Function-based spatiality will prove to be a valuable theoretical tool as managers gain insight into the impact of spatiality with their decisions. As this line of inquiry proceeds, it will facilitate greater understanding of specific markets, labor pools, and centers of production.

³⁰ Ibid. p 1

³¹ SASSEN, S. & PORTES, A. 1993. Miami: A New Global City? *Contemporary Sociology*, 22, 471-477.

³² PORTES, A. & STEPICK, A. 1985. Unwelcome Immigrants: The Labor Market Experiences of 1980 (Mariel) Cuban and Haitian Refugees in South Florida. *American Sociological Review*, 50, 493-514.

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