Culture of growth: Transformational and transactional perspectives from the Indian IT industry

Ashish Malik

University of Newcastle, Central Coast Campus, Australia

Abstract

The notion of growth has always attracted the interest of individuals, organisations and policymakers. The pervasive notion that growth is good and produces win-win outcomes has attracted mixed discourses by academics who have explored different levels and outcomes of growth, some of these discourses reveal a very different story. Whilst economic growth and development has been a key agenda for any political party, the impact of such an agenda, if not adopted using an inclusive approach has far reaching consequences. This new "culture of growth" is becoming interweaved at multiple levels and institutions are embroiled in it, often arguing for maintaining the legitimacy of such an approach. This chapter reviews the concept, its strengths and weaknesses, as applied to an organisational context. Reviewing research and examples from India's high growth information technology industry, this chapter brings to the fore both transformational and transactional views on the culture of growth in this industry.

Growth has been on the minds of people and people in organsiations and power for a very long time. Growth has had many meanings in the business world and ranges from increased profitability, revenues, market share, asset values, and overall return on investment to sustained competitive advantage (Barney, 1991; Wright et al, 2001). The need for national and sectoral growth has been a key a point of discussion in the public discourse. At a macro-level, many countries have stated this in public policy forums the need to improve their gross domestic product, foreign exchange reserves and achieving full or near to full employment. At a meso-level, industry and business captains have also had growth on their agenda for nearly the last four centuries employing, often, a range of local and global endeavours to achieve the same. More recently, we have seen renewed interest in mapping and explaining the 'culture of growth' in today's modern economy (Mokyr, 2017) and the subsequent reviews of the scholarship that was carried out in this book (Kasper, 2017; Ville, 2017). It has been argued here that the Enlightenment movement in Europe and the supporting cultural shifts helped sustained modern day economic growth. The underpinning argument espoused by Mokyr (2017) is that an elite group of intellectuals challenged the assumptions of commonly held values, beliefs and ideas or in other words a culture to produce a better and modern knowledge base. Culture creates that social relationship between people and how they interact with each other to put to use common ideas and modern knowledge in pursuit of better outcomes. In his book, Mokyr discusses two dominant approaches: growth based on Adam Smith's argument and the role institutions play in achieving this and Schumpeterian growth, which focuses on gales of creative destruction through technological change. He concurs more with the latter view of technology induced innovation and growth.

The above would suggest that all growth is good. The Dutch East India Company (DEIC), for example, which was established in the 1600s is prime example of how one of the earliest multinationals managed its need for growth. Growth for the DEIC had a single track agenda– that of maximising wealth for its shareholders. Such growth agendas often come at the expense of people and they disrupt harmony and order in a nation's ecosystem. The practices that the DEIC implemented may not resonate well with some of what modern society and the current regulatory system would allow. Even then, the exploitative approaches that the DEIC adopted could not have be condoned, as the dominant culture for seeking such growth was brought through brutal and commercial force. What was the culture of growth at the DEIC? A question that often comes to our minds is have we learnt enough from the excesses caused by such firms? While the practices might have been moderated down a bit, the focus on improving shareholder value remains a key focus of most for-profit firms. The question is whether firms achieve profit through people (Applebaum et al., 2000; Boxall & Purcell, 2016; Malik & Rowley, 2015) or profit over people, especially in times of a crisis (Malik, 2017)?

Driven by research choices of the author, this chapter focuses on research that is largely grounded in uncovering explanations of growth through the theoretical lenses of strategy, managing people and innovation. To this end, building on the author's individual and collaborative program of research on the Indian IT industry, this chapter explores the dominant notions of growth followed by the industry, paying special attention to whether such growth was more as a result of following transactional and exploitative approaches to managing people and resources or more of transformational and exploratory approaches of managing people and resources. First, an overview of the Indian IT industry and its evolution from virtually nothing to a position of global dominance if offered. This is followed by a critical analysis of the challenges faced by the industry to sustain its pressures of growth and the changing landscape of the industry.

Indian IT Industry's Story of Growth

Since the mid- to late-1970s, there has been a renewed interest in studying technologically induced change and growth, especially in the high-technology information and communications technology industry. From modest beginnings of the late 1970s, when the technology infrastructure if the country was struggling to compete at an international level, the modern day growth story of Indian IT industry has come a long way. From a few million dollars in the early 1980s, through revenues in excess of US$ 118 billion, employing around 3 million people in 2014 (NASSCOM, 2014), the current revenues of the Indian IT and business process and technology management industry are estimated to about US$ 154 billion (NASSCOM, 2017). While there are several metaphors that have been used to describe the story of growth of the Indian IT industry (Arora & Gambardella, 2006; Vittal, 2004; Rahman & Kurien, 2007; Malik & Rowley, 2015), the industry has more recently faced a major slowdown as a result of several factors such as global financial crisis, overall slowdown of demand for export of services as well as an increasing rate of disruptive technological innovation. The increasing use of SMAC stack as a disruptor has been noted in the wider literature. SMAC (Social Media, Mobility Devices, Analytics and Cloud Computing) has been noted as the major technological disruptor and is forcing IT majors to reinvent itself in a number of ways to deliver ongoing value through changes in their business model (Malik & Rowley, 2015; Malik et al., 2017). The rate of technological changes in the IT industry has been well document at different stages of its evolution by academics and policy makers, often employing different theoretical explanations for explaining how the sector continued to evolve and recreate itself in light of these changes (Arora, Asundi & Fernandes, 2001; Arora & Athreye, 2002; Arora & Gambardella, 2006; Athreye, 2004, 2005; Banerjee, 2004). Among several explanations advanced, the rapid growth of high-tech clusters around the world can in part be explained by the extensive human capital agglomeration and knowledge spill overs from multinational corporations. The central argument is that through attrition of talented employees from these firms to Indian IT majors, the knowledge spill overs from these highly experienced and qualified employees has informed the growth strategies of Indian IT firms (Arora et al, 2001a; Arora & Gambardella, 2004; Saxenian, 1994, 2001). Arora and Athereye (2002) have argued for a advanced case emerging organisational capabilities of the Indian IT firms that have been refined and redefined over a period of time.

Others (Malik, 2009; Malik, Sinha & Blumenfeld, 2012) have argued for the role of extensive investments in training and building a culture of learning and strong process management discipline in developing a sustained level of growth. Still others have argued for an important and positive role played by the state in supporting the growth trajectory of the Indian IT industry. Malik and Nilakant (2015) note that a few actors in the political and business sectors changed the dominant logic of the government stakeholders to liberalise the sector and allow concessions to labour and investment policies for witnessing a sustained level of growth. Such a view is not shared by some who argue that the state was indifferent or even played an adversarial role by barring private investment and entrepreneurial activity in the IT sector as they wanted to keep it to the public sector (Dossani, 2005). What is clear from research is that the high rates of technological change and increased competition had forced IT businesses and its managers to continuously reinvent their business models. It is through such constant renewal of business models and change management efforts of business leaders that the Indian IT industry, that it has continued to sustain high levels of growth even in a post-global financial crisis era (Malik, 2013, 2017). While the extant literature offers useful insights regarding factors such as human capital agglomeration, notions of dependence and collaboration between the clients and vendors, and the externality-inducing effect may have had on growth high-tech clusters of firms, there are other additional explanations such as the variations in the strength of organisational capabilities (Arora et al., 2001a; Athreye, 2005). In a similar vein, Heeks (1996, 1998) has long argued that the profile and growth of the Indian IT industry can be best described as one that is 'uneven': especially in terms of the profile and composition of players, their size, profitability, ownership and the nature of services. In a similar vein, Ethiraj et al (2005) have found that less than 1% of the total number of firms in the Indian IT industry account for close to 60% of the total revenues of the industry, which would suggest there are some significant firm level differences in performance in these firms that continue to grow and develop so well. Such differences persisted for almost another decade since Ethiraj et al's research, however, the rate of growth has significantly come down (NASSCOM, 2017). What is not clear in the extent literature is the nature of changes that the Indian IT majors implement in dealing with renewed competitive pressures posed by technology disruption (e.g. such as SMAC) and an overall decline in aggregate demand in a post-global financial crisis period. To better understand this, we split the analysis of growth using the notion of transactional perspectives of growth with more transformational perspectives of growth.

Adopting the above analytical lens is important as it reflects a change in the cultural and business values and attitudes of the leadership in a bid to avert the declining trends in a post-

GFC era. Although there are popular (Hofstedian) dimensions of culture that are widely used and adopted in the literature, recently, in an Indian cultural context, scholars have challenged the relevance of Hofstedian cultural orthodoxy by focusing on the concept of Indianness and other contextually relevant explanations (Laleman et al., 2015; Malik & Pereira, 2015, 2016 a, b; Pereira & Malik, 2013, 2015 b-d, 2016; Sharma et al., 2017). Captured in these debates is the hard-wired cultural mindset of process and project-specific discipline that was reinforced by leadership in the earlier stages of the IT industry's spectacular growth. We discuss this in the following section on transactional perspectives of growth.

Transactional Perspectives of Growth

The early explanations of performance differences between very large IT firms, who commanded a significant share of the market can in part be attributed to the extensive focus on a process and project management discipline and focusing on adherence to client specifications (Ethiraj et al., 2005; Malik, & Blumenfeld, 2015; Malik, & Nilakant, 2015b). This approach was also borne out in the dominant business models (Malik, & Rowley, 2015a, b, c) of Indian IT firms that relied extensively on investing in certain quality management accreditation frameworks for infusing process discipline in its relatively young cohort of engineers who were tasked to deliver to exacting standards of diverse sets of client expectations (Pereira & Malik, 2015a). These firms leveraged their training and development infrastructure to further reinforce the skills and capabilities that were necessary for delivering on various client specifications (Malik, 2009; Malik & Nilakant 2011). Concomitant to these supporting changes in training and development, a number of large firms also found innovative and effective ways of managing a large and relatively demanding cohort of Generation Y employees (Pereira, Malik, Munjal, et al. 2017). To achieve growth, largely the work design that was employed was akin to *Modified Taylorism* (Malik, 2009) that ensured strict compliance and adherence to standards and predictable levels of service delivery (Malik et al., 2017 *in press*). Although this approach served well for the industry for the first three decades of its growth, this business model was constantly being challenged in a pre- and post-GFC era. During its growth, the transactional perspective has been criticised for extensive control and micro-management approaches to deliver exacting levels of performance. Additionally such an approach produce adverse employee well-being outcomes, some of which is clearly evident in the higher than average levels of employee turnover faced by the industry. This and the changed economic landscape required leaders to adopt a transformational approach for managing future growth and people.

Transformational Perspectives of Growth

There are several expositions that have argued that sustained levels growth for this industry are most likely if it invests in research and development and new and innovative products, processes and business models for delivery of goods and services and in managing work and people (Arora, 2006; Malik, 2013b; Malik & Rowley, 2015). Given that the Indian institutional and business environment is much different than how Western nations undertake innovation, scholars have argued for India's unique, for example, a *furgal* (or Jugaad) approach to innovation, which has also found its way in other emerging markets that are affected by institutional voids (Cappelli, Singh, Singh, & Useem, 2010; Govindrajan & Trimble, 2013; Govindarajan, & Ramamurti, 2011; Immelt, Govindarajan, & Trimble, 2009; Kumar & Puranam, 2012; Radjou, Prabhu & Ahuja,2012). Examples of such frugal innovation include innovation in business model at Narayana Hrudayala hospital's for low-cost open-heart surgery and development of product innovations such as GE's low cost, fit for purpose, cardiogram. These ideas and products are findings their wat into other emerging economies. Debunking the myth that Indians are not creative and innovative, Kumar and Puranam (2012) offer several examples of why aspects Indians' innovativeness have thus far been hidden. The application of some innovative process innovations through HR and management practices in the Indian IT industry have also been recently reported. (Malik, 2015a, b). With an increasing competitive pressures and India's proven technical ability, we are witnessing a crossvergence in HRM and management practices at Indian subsidiary operations, which is gradually diffusing to other domestic and joint-venture business models in the IT industry. Evidence off increased product development capabilities and an implementation of transformational approach to managing people, wherein employee trust, commitment and empowerment is given greater emphasis over control and discipline is now emerging in recent studies on the Indian IT industry (Malik, & Nilakant, 2015a; Malik, Pereira, & Budhwar, 2017; Malik, Pereira, & Shlomo, 2017; Malik, Sinha, Pereira, & Rowley, 2017). There is also an increasing commitment by large global IT and other sector players to establish and set up their global R&D base in India (e.g. Phillips, Intel, Nvidia Graphics, GE to name a few). The above confirms that yes, there is adequate evidence of creative and innovative activity occurring in India and most of the growth in this area requires investment in a different set of people management and organisational capabilities. The downside of such an approach in an Indian context is that there isn't enough managerial bandwidth that can adopt this style of working and thinking.

Discussion and Conclusion

The above two perspectives on growth in the Indian IT industry highlights the strengths and weaknesses of each approach. While they both have delivered on the growth agenda the culture of growth in each approach is quite distinctive, the wellsprings of which can be traced back to some of the earlier research on strategic choices that leaders can employ in managing people and work in constraining or more liberal environments. While Indian leadership has demonstrated beyond doubt their ability to deliver with high levels off process and project discipline, managing the next wave of 'growth' using innovation and creative talent, will require exactly that from its managers and leaders. It will take extensive training, mentoring and coaching of the Indian leadership to move away from their dominant control, realist and objectivist paradigms before they can fully embrace some mix of employee empowerment, trust, experimentation, adaptation to new ideas, risk-taking behaviour and maintain transparency in their actions to support this new mindset. If the leadership can demonstrate success in this approach the Indian IT industry can expect to see a spectacular and sustained performance in times to come.

References

Arora, A. 2006. *The Indian software industry and its prospects*. The Heinz School of Public Policy and Management, Carnegie Mellon University.

Arora, A., Asundi, J. V., & Fernandes, R. 2001. The Indian software services industry. *Research Policy*, 30(8): 1267–1287.

Arora, A., Gambardella, A., & Torrisi, S. 2001a. *In the footsteps of the Silicon Valley? Indian and Irish software in the international division of labour*. [Discussion Paper No. 00-41] Stanford, CA: Stanford Institute for Economic Policy Research.

Arora, A., & Gambardella, A. 2004. *The globalization of the software industry: perspectives and opportunities for developed and developing countries* (No. w10538). National Bureau of Economic Research.

Arora, A., & Athreye, S. 2002. The software industry and India's economic development. *Information Economics and Policy,* 14: 253–273.

Arora, A., & Gambardella, A. 2006, eds.. *From underdogs to tigers? The rise and growth of the software industry in Brazil, China, India, Ireland, and Israel*. Oxford: Oxford University Press.

Athreye, A. 2004. The role of transnational corporations in the evolution of a high-tech industry: The case of India's software industry—A comment. *World Development, 32(*3), 555–560.

Athreye, A. 2005. The Indian software industry and its evolving service capability. *Industrial and Corporate Change,* 14(3): 393–418.

Appelbaum, E., Bailey, T., & Berg, P. Kalleberg, A. 2000. *Manufacturing advantage: Why high-performance work systems pay off*. NY: ILR Press.

Barney, J. 1991. Firm resources and sustained competitive advantage. *Journal of management*, 17(1), 99-120.

Banerjee, P. 2004. *The Indian software industry: Business strategy and dynamic co-ordination.* New Delhi, India: Palgrave-MacMillan.

Boxall, P., & Purcell, J. 2016. *Strategy and Human Resource Management*, 4th edition, Palgrave Macmillan, UK

Dossani, R. 2005. *Origins and growth of the software industry in India* (Working paper). Palo Alto, CA: Stanford University, Asia-Pacific Research Centre.

Ethiraj, S. E., Kale, P., Krishnan, M. S., & Singh, J. V. 2005. Where do capabilities come from and how do they matter? A study in the software services industry. *Strategic Management Journal,* 26: 25–45.

Govindarajan, V., & Ramamurti, R. 2011. Reverse innovation, emerging markets, and global strategy. *Global Strategy Journal*, 1(3-4): 191-205.

Govindarajan, V., & Trimble, C. 2013. *Reverse innovation: Create far from home, win everywhere*. Boston, MA: Harvard Business Press.

Immelt, J. R., Govindarajan, V., & Trimble, C. 2009. How GE is disrupting itself. *Harvard Business Review*, 87(10): 56-65.

Heeks, R., 1996. *Indian software industry: State policy, liberalisation and industrial development*, New Delhi, India: Sage.

Heeks, R. 1998, October. *The uneven profile of Indian software exports* (Working Paper). Manchester, England: University of Manchester, IDPM. Retrieved January 27, 2009, from http://www.man.ac.uk/idpm

Kasper, W. 2017. A culture of growth: The origins of the modern economy [Book Review]. *Policy: A Journal of Public Policy and Ideas*, 33(2): 57.

Kumar, N., & Puranam, P. 2012. *Inside India: The emerging innovation challenge to the West.* Boston, MA: Harvard Business Review Press

Laleman, F., Pereira, V., & Malik, A. 2015. Understanding cultural singularities of 'Indianness' in an intercultural business setting. *Culture and Organization*, 21(5): 427-447.

Malik, A. 2009. Training drivers, competitive strategy, and clients' needs: Case studies of three business process outsourcing companies. *Journal of European Industrial Training*, *33*(2 and 3): 160-177.

Malik, A. 2013. Post-GFC people management challenges: a study of India's information technology sector. *Asia Pacific Business Review*, 19(2): 230-246.

Malik, A. 2013b. Connecting Work Design and Business Ecosystems: Fostering Innovation in Information Technology Firms. *Journal of Economic and Social Policy*, 15(2): 1-23.

Malik, A. 2015a. Innovative people management approaches from three software research and product development firms. In A. Malik, & C. Rowley (Eds.), *Business Models and People Management in the Indian IT Industry: From People to profits.* (1ST ed., pp. 118-136). Oxon and New York: Routledge.

Malik, A. 2015b. Innovative HR practices: Evidence from three IT software services organisations. In A. Malik, & C. Rowley (Eds.), *Business Models and People Management in the Indian IT Industry: From People to profits.* (1ST ed., pp. 93-117). Oxon and New York: Routledge.

Malik, A. 2017. *Human Resource Management and the Global Financial Crisis: Evidence from India's IT/BPO industry.* UK: Routledge.

Malik, A., & Blumenfeld, S. 2015. Skills, strategy and people management in the IT industry. In A. Malik (Ed.), *Business Models and People Management in the Indian IT Industry: From People to profits.* (1ST ed., pp. 35-57). Oxon and New York: Routledge.

Malik, A., & Nilakant, V. 2011. Extending the 'size matters' debate: Drivers of training in three business process outsourcing SMEs in India. *Management Research Review*, 34(1): 111-132.

Malik, A., & Nilakant, V. 2015a. Knowledge integration mechanisms in high-technology business-to-business services vendors. *Knowledge Management Research & Practice*. doi:10.1057/kmrp.2015.9

Malik, A., & Nilakant, V. 2015b. Context and evolution of the Indian IT Industry. In A. Malik, & C. Rowley (Eds.), *Business Models and People Management in the Indian IT Industry: From People to profits* (1st ed., pp. 15-34). Abingdon, UK: Routledge.

Malik, A., & Pereira, V. 2015. Culture research in India: critical issues and future research opportunities. In *Investigating Cultural Aspects in Indian Organizations* (pp. 185-197). Springer International Publishing.

Malik, A., & Pereira, V. (Eds.). 2016a. *Indian culture and work organisations in transition*. Routledge.

Malik, A., & Pereira, V. 2016b. India: a culture in transition. In Ashish Malik & Vijay Pereira (Eds). *Indian Culture and Work Organisations in Transition* (pp. 1-13). New Delhi India: Routledge.

Malik, A., & Pereira, V. 2016c. Theorising Human Capital Formation for Innovation in India's Global Information Technology Sector. In S. Kundu, & S. Munjal (Eds.), *Human Capital and Innovation: Examining the Role of Globalization* (pp. 221-249). UK: Palgrave Macmillan.

Malik, A., Pereira, V., & Budhwar, P. 2017 in press. Value creation and capture through human resource management practices: Gazing through the business model lens. *Organisational Dynamics* http://dx.doi.org/10.1016/j.orgdyn.2017.09.002

Malik, A., Pereira, V., & Shlomo, T. 2017 in press. The role of HRM practices in product development: Contextual ambidexterity in a US MNC's subsidiary in India *International Journal of Human Resource Management*. http://dx.doi.org/10.1080/09585192.2017.1325388

Malik, A., & Rowley, C. 2015a. *Business models and people management in the Indian IT industry: From people to profits.* (1ST ed.). A. Malik & C. Rowley (Eds.), UK: Routledge

Malik, A., & Rowley, C. 2015b. Towards an integrated model of human capital development for business model innovation: Synthesis and new knowledge. In A. Malik, & C. Rowley (Eds.), *Business Models and People Management in the Indian IT Industry: From People to profits.* (1ST ed., pp. 219-231). Oxon and New York: Routledge.

Malik, A., & Rowley, C. 2015c. Profiting from people: An introduction.. In A. Malik, & C. Rowley (Eds.), *Business Models and People Management in the Indian IT Industry: From People to profits.* (1ST ed., pp. 1-12). Oxon and New York: Routledge.

Malik, A., Sinha, A. & Blumenfeld, S. 2012. Role of quality management capabilities in developing market-based organisational learning capability: case study evidence from four business process outsourcing firms. *Industrial Marketing Management*, 41(4): 639-648.

Malik, A., Sinha, P., Pereira, V., & Rowley, C., 2017 in press. Implementing Global-Local Strategies in a Post-GFC Era: Creating an Ambidextrous Context Through Strategic Choice and HRM. https://doi.org/10.1016/j.jbusres.2017.09.052 *Journal of Business Research*

Mokyr, J. 2016. *A culture of growth: the origins of the modern economy*. Princeton University Press.

NASSCOM 2014. *The IT-BPM sector in India - Strategic Review 2014.* New Delhi: NASSCOM.

NASSCOM 2017. *The IT-BPM sector in India - Strategic Review 2017.* New Delhi: NASSCOM. Accessed from http://www.nasscom.in/knowledge-center/publications/it-bpm-industry-india-2017-strategic-review on 14th October 2017

Pereira, V., & Malik, A. 2013. East is East? Understanding Aspects of Indian Culture(s) within Organisations. *Culture and Organization* Vol. 19(5), pp. 453-456

Pereira, V., & Malik, A. 2015a. *Human capital in the Indian IT/BPO industry*. (1st ed.). London: Palgrave Macmillan.

Pereira, V., & Malik, A. 2015b. *Investigating Cultural Aspects in Indian Organizations: Empirical Evidence*. Switzerland: Springer Publishing.

Pereira, V., & Malik, A. 2015c. Culture in Indian organisations: Evidence-based research and practice. In V. Pereira, & A. Malik (Eds.), *Investigating Cultural Aspects in Indian*

Organizations: Empirical Evidence (pp. 1-10). Cham, Switzerland: Springer. doi:10.1007/978-3-319-16098-6

Pereira, V., & Malik, A. 2015d. Making sense and identifying aspects of Indian culture(s) in organisations: Demystifying through empirical evidence. *Culture and Organization*, 21(5), 355-365. doi:10.1080/14759551.2015.1082265

Pereira, V., & Malik, A. 2016a. Conclusion and future research directions. In *Indian Culture and Work Organisations in Transition* (pp. 220-232). Abingdon, Oxon, UK and New Delhi, India: Routledge, Taylor & Francis Group.

Pereira, V., & Malik, A., Munjal, S., et al. 2017. Managing Yopatriates: A study of Generation Y Expatriates in an Indian Multi-National Corporation. *Journal of International Management.* DOI: 10.1016/j.intman.2016.11.002

Rahman, W., & Kurein, P. 2007. *Blind men and the elephant: Demystifying the global IT services industry*. New Delhi: Sage Publications.

Radjou, N., Prabhu, J., & Ahuja, S. 2012. *Jugaad Innovation: Think frugal, be flexible, generate breakthrough growth*. Jossey-Bass.

Saxenian, A. 1994. *Regional advantage, culture and competition in Silicon Valley and Route 128*. Cambridge, MA: Harvard University Press.

Saxenian, A. 2001. *Bangalore: The Silicon Valley of Asia?* (Working Paper No. 91). Palo Alto, CA: Stanford University, Center for Research on Economic Development and Policy Reform.

Ville, S. 2017. A Culture of Growth: The Origins of the Modern Economy. By Joel Mokyr. Princeton: Princeton University Press, 2017. xiv 403 pp. References, index. Cloth, $35.00. ISBN: 978-0-691-16888-3. *Business History Review*, 91(2), 389-391.

Vittal, N. 2004. The horse that flew. Chapter 24 In *India: Technology and a vision for the future.* Hyderabad: ICFAI Press.

Wright, P., Dunford, B., & Snell, S. 2001. Human resources and the resource-based view of the firm. *Journal of Management,* 6: 701–721