#### University of Hong Kong HKU Business School

Course	Instructor
MGMT6010	Yanbo Wang
Workshop on Innovation and Entrepreneurship	KK Leung #11-07
KK Leung #11-19	yanbo.wang@hku.hk
Course Hours: WED 18:00 – 21:00	Office Hours: WED 17:00-18:00

#### Objectives

This course introduces students to theoretical and empirical research on innovation and entrepreneurship. The course will focus on the unique dynamics of high-technology industries and develop an understanding of how firms can seize upon the opportunities and avoid the hazards created by these dynamics. Our goal is to appreciate research on the entrepreneurial and innovation process, knowledge and resource sourcing strategies, and the appropriation of value from innovations. The seminar will emphasize both conceptual framework and causal inference.

#### Requirements

Students are expected to read all required readings before the class meeting. The assigned readings include classics, review articles, and recent empirical research. Other readings are optional although they are not less important. Students should be prepared to present the core ideas in the assigned readings and lead the classroom discussion. Those who fail to attend or keep up with reading more than twice will be asked to withdraw from the class.

Grades will be based on the review of research papers (30%), class participation (30%), and term project (40%). For each class session, each student should prepare a brief (no more than three pages, 1.5 spaced, 12-point Time New Roman) report on the assigned reading. Please address:

- a. Main findings and contributions
- b. Weakness in the authors' theory or empirical analysis
- c. Direction for future research

These reports are due 9pm the day before the class.

Term project applies your understanding of readings and other materials to a topic of your choice. You should pose research questions, develop hypotheses, and design the empirical analyses (the plan may be an experiment, survey, or collection of archival data). Your final report should be 1.5 spaced, 12-point Time New Roman, and not longer than 12 pages (figures, tables and reference included).

#### Class schedule

January 17, 24, 31; February 7, 21, 28; March 13, 20, 27; April 3, 10, 17, 24, 2024

## Academic Honesty & Plagiarism

Academic integrity and honesty are essential for the pursuit and acquisition of knowledge. The University and School expect every student to uphold academic integrity & honesty at all times. Academic dishonesty is any misrepresentation with the intent to deceive, or failure to acknowledge the source, or falsification of information, or inaccuracy of statements, or cheating at examinations/tests, or inappropriate use of resources. You are encouraged to review the University Statement on plagiarism at http://www.hku.hk/plagiarism/.

#### Schedule of Classes

Note: Subject to change

#### SESSION 1 MODEL OF TECHNOLOGY AND INDUSTRY EVOLUTION

#### Reading

- 1. Abernathy, W. J., & Utterback, J. M. (1978). Patterns of industrial innovation. *Technology review*, *80*(7), 40-47.
- 2. Suarez, F. F., & Utterback, J. M. (1995). Dominant designs and the survival of firms. *Strategic management journal*, *16*(6), 415-430.
- 3. Anderson, P. and Tushman, M. 1990. Technological discontinuities and dominant designs: A cyclical model of technological change. *Administrative Science Quarterly*. 35, 604-633
- 4. Klepper, S. (1996). Entry, exit, growth, and innovation over the product life cycle. *The American economic review*, 562-583.

## Optional

- 1. Griliches Z. 1957. "Hybrid Corn: An Exploration in the Economics of Technological Change," *Econometrica*, 25(4), 501-522.
- 2. Sahal, D. (1981). Alternative conceptions of technology. Research policy, 10(1), 2-24.
- 3. Dosi, G. (1982). Technological paradigms and technological trajectories: a suggested interpretation of the determinants and directions of technical change. *Research policy*, *11*(3), 147-162.
- 4. Klepper, S. (1997). Industry life cycles. Industrial and corporate change, 6(1), 145-182.
- Murmann, J. P., & Frenken, K. (2006). Toward a systematic framework for research on dominant designs, technological innovations, and industrial change. *Research policy*, 35(7), 925-952.
- 6. Moeen, M., & Agarwal, R. (2017). Incubation of an industry: Heterogeneous knowledge bases and modes of value capture. *Strategic Management Journal*, *38*(3), 566-587.
- 7. Agarwal, R., & Tripsas, M. (2008). Technology and industry evolution. Handbook of technology and innovation management, 1-55.
- Ahuja, G., Lampert, C. M., & Tandon, V. (2008). 1 moving beyond Schumpeter: management research on the determinants of technological innovation. *The Academy of Management Annals*, 2(1), 1-98.
- 9. Goldfarb, A., Taska, B., & Teodoridis, F. (2023). Could machine learning be a general purpose technology? a comparison of emerging technologies using data from online job postings. *Research Policy*, *52*(1), 104653.

#### SESSION 2 VALUE APPROPRIABILITY AND APPROPRIATION

## Reading

- 1. Teece, D. J. (1986). Profiting from technological innovation: Implications for integration, collaboration, licensing and public policy. *Research policy*, *15*(6), 285-305.
- 2. Gans, J. S., Hsu, D. H., & Stern, S. (2000). When does start-up innovation spur the gale of creative destruction?.
- 3. Qian, Y. (2014). Counterfeiters: Foes or friends? How counterfeits affect sales by product quality tier. *Management Science*, *60*(10), 2381-2400.
- 4. Zhao, M. (2006). Conducting R&D in countries with weak intellectual property rights protection. *Management science*, *52*(8), 1185-1199.
- 5. Berry, H. (2006). Leaders, laggards, and the pursuit of foreign knowledge. *Strategic Management Journal*, 27(2), 151-168.
- Katila, R., Rosenberger, J. D., & Eisenhardt, K. M. (2008). Swimming with sharks: Technology ventures, defense mechanisms and corporate relationships. *Administrative* science quarterly, 53(2), 295-332.

- 1. Moser, P. (2013). Patents and innovation: evidence from economic history. *Journal of economic perspectives*, 27(1), 23-44.
- 2. Williams, H. L. (2013). Intellectual property rights and innovation: Evidence from the human genome. *Journal of Political Economy*, *121*(1), 1-27.
- 3. Lerner, J. (2002). 150 years of patent protection. *American Economic Review*, 92(2), 221-225.
- 4. Lerner, J. (2009). The empirical impact of intellectual property rights on innovation: Puzzles and clues. *American Economic Review*, *99*(2), 343-348.
- 5. Moser, P. (2012). Innovation without patents: Evidence from World's Fairs. *The Journal of Law and Economics*, *55*(1), 43-74.
- 6. Lerner, J., & Seru, A. (2022). The use and misuse of patent data: Issues for finance and beyond. *The Review of Financial Studies*, *35*(6), 2667-2704.
- 7. Henderson, R., & Cockburn, I. (1994). Scale, scope and spillovers: the determinants of research productivity in ethical drug discovery.
- 8. Qian, Y., Gong, Q., & Chen, Y. (2015). Untangling searchable and experiential quality responses to counterfeits. *Marketing Science*, *34*(4), 522-538.
- 9. Zhu, F., & Liu, Q. (2018). Competing with complementors: An empirical look at Amazon. com. *Strategic management journal*, *39*(10), 2618-2642.
- 10. Hsu, D. H. (2006). Venture capitalists and cooperative start-up commercialization strategy. *Management Science*, *52*(2), 204-219.
- 11. Aggarwal, V. A., & Hsu, D. H. (2009). Modes of cooperative R&D commercialization by start-ups. *Strategic management journal*, *30*(8), 835-864.
- Katila, R., Rosenberger, J. D., & Eisenhardt, K. M. (2008). Swimming with sharks: Technology ventures, defense mechanisms and corporate relationships. *Administrative* science quarterly, 53(2), 295-332.

## SESSION 3 INCUMBENTS' MANAGEMENT OF TECH CHANGE

#### Reading

- 1. Henderson, R. (1993). Underinvestment and incompetence as responses to radical innovation: Evidence from the photolithographic alignment equipment industry. *The RAND Journal of Economics*, 248-270.
- 2. Christensen, C. M., & Bower, J. L. (1996). Customer power, strategic investment, and the failure of leading firms. *Strategic management journal*, *17*(3), 197-218.
- 3. Tripsas, M., Gavetti, G. (2000). Capabilities, cognition, and inertia: Evidence from digital imaging. Strategic Management Journal, 21(10-11), 1147-1161.
- 4. Gilbert, C. G. (2005). Unbundling the structure of inertia: Resource versus routine rigidity. *Academy of management journal*, *48*(5), 741-763.
- 5. Kapoor, R., & Klueter, T. (2015). Decoding the adaptability–rigidity puzzle: Evidence from pharmaceutical incumbents' pursuit of gene therapy and monoclonal antibodies. *Academy of management journal*, *58*(4), 1180-1207.

- 1. Tushman, M. L., & Anderson, P. (1986). Technological discontinuities and organizational environments. Administrative science quarterly, 439-465.
- Henderson, R. M., & Clark, K. B. (1990). Architectural innovation: The reconfiguration of existing product technologies and the failure of established firms. *Administrative science quarterly*, 9-30.
- 3. Tripsas, M. (1997). Unraveling the process of creative destruction: Complementary assets and incumbent survival in the typesetter industry. *Strategic management journal*, *18*(S1), 119-142.
- 4. Kaplan, S. (2008). Cognition, capabilities, and incentives: Assessing firm response to the fiber-optic revolution. *Academy of Management Journal*, *51*(4), 672-695.
- Benner, M. J. (2010). Securities analysts and incumbent response to radical technological change: Evidence from digital photography and internet telephony. *Organization Science*, 21(1), 42-62.
- 6. Danneels, E. (2011). Trying to become a different type of company: Dynamic capability at Smith Corona. *Strategic management journal*, *3*2(1), 1-31.

7. Eggers, J. P., & Park, K. F. (2018). Incumbent adaptation to technological change: The past, present, and future of research on heterogeneous incumbent response. *Academy of Management Annals*, *12*(1), 357-389.

## SESSION 4 SOURCES OF CREATIVITY AND INNOVATION

#### Reading

- 1. March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization science*, *2*(1), 71-87.
- 2. Sørensen, J. B., & Stuart, T. E. (2000). Aging, obsolescence, and organizational innovation. *Administrative science quarterly*, *45*(1), 81-112.
- 3. Burt, R. S. (2004). Structural holes and good ideas. *American journal of sociology*, *110*(2), 349-399.
- 4. Azoulay, P., Graff Zivin, J. S., & Manso, G. (2011). Incentives and creativity: evidence from the academic life sciences. *The RAND Journal of Economics*, *42*(3), 527-554.
- 5. Catalini, C. (2018). Microgeography and the direction of inventive activity. *Management Science*, *64*(9), 4348-4364.
- 6. Furman, J. L., Nagler, M., & Watzinger, M. (2021). Disclosure and subsequent innovation: Evidence from the patent depository library program. *American Economic Journal: Economic Policy*, *13*(4), 239-270.
- 7. Xu, D., Zhou, K. Z., & Chen, S. (2023). The impact of communist ideology on the patenting activity of Chinese firms. *Academy of Management Journal*, *66*(1), 102-132.

- 1. Von Hippel, E. (1976). The dominant role of users in the scientific instrument innovation process. *Research policy*, *5*(3), 212-239.
- 2. Von Hippel, E. (1994). "Sticky information" and the locus of problem solving: implications for innovation. *Management science*, *40*(4), 429-439.
- 3. Allen, T. J., & Cohen, S. I. (1969). Information flow in research and development laboratories. *Administrative science quarterly*, 12-19.
- 4. Allen, T. J. (2007). Architecture and communication among product development engineers. *California Management Review*, *49*(2), 23-41.
- 5. Lane, J. N., Ganguli, I., Gaule, P., Guinan, E., & Lakhani, K. R. (2021). Engineering serendipity: When does knowledge sharing lead to knowledge production?. *Strategic management journal*, *42*(6), 1215-1244.
- Jones, C., Svejenova, S., Pedersen, J. S., & Townley, B. (2016). Misfits, mavericks and mainstreams: Drivers of innovation in the creative industries. *Organization Studies*, 37(6), 751-768.
- 7. Furman, J. L., & Stern, S. (2011). Climbing atop the shoulders of giants: The impact of institutions on cumulative research. *American Economic Review*, *101*(5), 1933-1963.
- Furman, J. L., & Teodoridis, F. (2020). Automation, research technology, and researchers' trajectories: Evidence from computer science and electrical engineering. *Organization Science*, *31*(2), 330-354.
- 9. Kaplan, S., & Vakili, K. (2015). The double-edged sword of recombination in breakthrough innovation. *Strategic Management Journal*, *36*(10), 1435-1457.
- 10. Flammer, C., & Kacperczyk, A. (2016). The impact of stakeholder orientation on innovation: Evidence from a natural experiment. *Management Science*, *6*2(7), 1982-2001.
- Leahey, E., Beckman, C. M., & Stanko, T. L. (2017). Prominent but less productive: The impact of interdisciplinarity on scientists' research. *Administrative Science Quarterly*, 62(1), 105-139.
- 12. Luo, J., Chen, J., & Chen, D. (2021). Coming back and giving back: Transposition, institutional actors, and the paradox of peripheral influence. *Administrative Science Quarterly*, *66*(1), 133-176.
- Teodoridis, F., Bikard, M., & Vakili, K. (2019). Creativity at the knowledge frontier: The impact of specialization in fast-and slow-paced domains. *Administrative Science Quarterly*, 64(4), 894-927.

- 14. Jia, N., Huang, K. G., & Man Zhang, C. (2019). Public governance, corporate governance, and firm innovation: An examination of state-owned enterprises. *Academy of Management Journal*, 62(1), 220-247.
- 15. Zheng, Y., & Wang, Q. (2020). Shadow of the great firewall: The impact of Google blockade on innovation in China. *Strategic Management Journal*, *41*(12), 2234-2260.
- Huang, K. G., Jia, N., & Ge, Y. (2024). Forced to innovate? Consequences of United States' anti-dumping sanctions on innovations of Chinese exporters. *Research Policy*, 53(1), 104899.
- 17. Ederer, Florian and Gustavo Manso, 2013, Is pay for performance detrimental to innovation?, Management Science 59: 1496-1513.
- 18. Leahey, Erin. "From sole investigator to team scientist: Trends in the practice and study of research collaboration." Annual review of sociology 42 (2016): 81-100.
- Ahmadpoor, Mohammad, and Benjamin F. Jones. 2019. "Decoding Teams and Individual Impact in Science and Invention."Proceedings of the National Academy of Sciences 116 (28): 13885-13890.
- 20. Zhang, X., & Zhu, F. (2011). Group size and incentives to contribute: A natural experiment at Chinese Wikipedia. *American Economic Review*, *101*(4), 1601-1615.
- 21. Shi, F., Teplitskiy, M., Duede, E., & Evans, J. A. (2019). The wisdom of polarized crowds. *Nature human behaviour*, *3*(4), 329-336.

## SESSION 5 ENTREPRENEURSHIP: GOOD VS. BAD; NATURE VS. NURTURE (I)

## Reading

- 1. Aldrich, H. E., & Fiol, C. M. (1994). Fools rush in? The institutional context of industry creation. *Academy of management review*, *19*(4), 645-670.
- 2. Edward P. Lazear, "Entrepreneurship", Journal of Labor Economics, Vol. 23 No. 4, 2005, 649-680.
- 3. Baumol, W. J. (1996). Entrepreneurship: Productive, unproductive, and destructive. *Journal* of business venturing, 11(1), 3-22.
- 4. Wang, Y., Stuart, T., & Li, J. (2021). Fraud and innovation. Administrative Science Quarterly, 66(2), 267-297.
- 5. Matthew J. Lindquist, Joeri Sol, and Mirjam Van Praag, "Why Do Entrepreneurial Parents Have Entrepreneurial Children?" Journal of Labor Economics, Vol. 33 No. 2, April 2015.
- 6. Josh Lerner and Ulrike Malmendier, "With a little help from my (random) friends: Success and failure in post-business school entrepreneurship", Review of Financial Studies, Vol. 26, No. 10, 2013, 2411-2452.

## Optional

- 1. Kerr, W. R., Nanda, R., & Rhodes-Kropf, M. (2014). Entrepreneurship as experimentation. *Journal of Economic Perspectives*, *28*(3), 25-48.
- 2. Åstebro, Thomas, Holger Herz, Ramana Nanda, and Roberto Weber, 2014, Seeking the roots of entrepreneurship: Insights from behavioral economics, Journal of Economic Perspectives 28:3, 49-70.
- 3. Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of management review*, *25*(1), 217-226.
- Eesley, C., & Wang, Y. (2017). Social influence in career choice: Evidence from a randomized field experiment on entrepreneurial mentorship. *Research policy*, 46(3), 636-650.
- 5. Lyons, E., & Zhang, L. (2018). Who does (not) benefit from entrepreneurship programs?. *Strategic Management Journal*, *39*(1), 85-112.
- 6. Stuart, T. E., & Sorenson, O. (2003). Liquidity events and the geographic distribution of entrepreneurial activity. *Administrative science quarterly*, *48*(2), 175-201.

## SESSION 6 ENTREPRENEURSHIP: GOOD VS. BAD; NATURE VS. NURTURE (II)

## Reading

- 1. Yi, J., Chu, J., & Png, I. P. (2022). Early-life exposure to hardship increased risk tolerance and entrepreneurship in adulthood with gender differences. *Proceedings of the National Academy of Sciences*, *119*(15), e2104033119.
- 2. Sørensen, J. B. (2007). Bureaucracy and entrepreneurship: Workplace effects on entrepreneurial entry. *Administrative Science Quarterly*, *52*(3), 387-412.
- 3. Åstebro, T., Chen, J., & Thompson, P. (2011). Stars and misfits: Self-employment and labor market frictions. *Management Science*, *57*(11), 1999-2017.
- 4. Kacperczyk, A., & Younkin, P. (2017). The paradox of breadth: The tension between experience and legitimacy in the transition to entrepreneurship. *Administrative Science Quarterly*, 62(4), 731-764.
- 5. Guzman, J., Oh, J. J., & Sen, A. (2020). What motivates innovative entrepreneurs? Evidence from a global field experiment. *Management science*, *66*(10), 4808-4819.

## Optional

- 1. Dobrev, S. D., & Barnett, W. P. (2005). Organizational roles and transition to entrepreneurship. *Academy of Management Journal*, *48*(3), 433-449.
- 2. Sørensen, J. B., & Sharkey, A. J. (2014). Entrepreneurship as a mobility process. *American Sociological Review*, *79*(2), 328-349.
- 3. Hamilton, B. H. (2000). Does entrepreneurship pay? An empirical analysis of the returns to self-employment. *Journal of Political economy*, *108*(3), 604-631.
- 4. Eberhart, R. N., Eesley, C. E., & Eisenhardt, K. M. (2017). Failure is an option: Institutional change, entrepreneurial risk, and new firm growth. *Organization Science*, *28*(1), 93-112.
- 5. Sorenson, O., Dahl, M. S., Canales, R., & Burton, M. D. (2021). Do startup employees earn more in the long run?. *Organization Science*, *32*(3), 587-604.
- 6. Stuart, T. E., & Ding, W. W. (2006). When do scientists become entrepreneurs? The social structural antecedents of commercial activity in the academic life sciences. *American journal of sociology*, *112*(1), 97-144.
- 7. Roach, M., & Sauermann, H. (2015). Founder or joiner? The role of preferences and context in shaping different entrepreneurial interests. *Management Science*, *61*(9), 2160-2184.

## SESSION 7 STARTUP GOVERNANCE AND ORGANIZATION

## Reading

- 1. Baron, J. N., Hannan, M. T., & Burton, M. D. (2001). Labor pains: Change in organizational models and employee turnover in young, high-tech firms. *American journal of sociology*, *106*(4), 960-1012.
- 2. Baron, J. N., Hannan, M. T., & Burton, M. D. (1999). Building the iron cage: Determinants of managerial intensity in the early years of organizations. *American sociological review*, 527-547.
- 3. Hellmann, T., & Wasserman, N. (2017). The first deal: The division of founder equity in new ventures. *Management Science*, *63*(8), 2647-2666.
- 4. Hellmann, T., & Puri, M. (2002). Venture capital and the professionalization of start-up firms: Empirical evidence. *The journal of finance*, *57*(1), 169-197.
- 5. Wasserman, N. (2003). Founder-CEO succession and the paradox of entrepreneurial success. *Organization science*, *14*(2), 149-172.

- 1. Beckman, C. M., & Burton, M. D. (2008). Founding the future: Path dependence in the evolution of top management teams from founding to IPO. *Organization science*, *19*(1), 3-24.
- 2. Leonard-Barton, D. (1992). Core capabilities and core rigidities: A paradox in managing new product development. *Strategic management journal*, *13*(S1), 111-125.
- 3. Phillips, D. J. (2005). Organizational genealogies and the persistence of gender inequality: The case of Silicon Valley law firms. *Administrative Science Quarterly*, *50*(3), 440-472.
- 4. Hochberg, Y. V. (2012). Venture capital and corporate governance in the newly public firm. *Review of Finance*, *16*(2), 429-480.

- 5. Bernstein, S., Giroud, X., & Townsend, R. R. (2016). The impact of venture capital monitoring. *The Journal of Finance*, *71*(4), 1591-1622.
- 6. Hallen, B. L., Davis, J. P., & Murray, A. (2020). Entrepreneurial network evolution: Explicating the structural localism and agentic network change distinction. *Academy of Management Annals*, *14*(2), 1067-1102
- 7. Gans, J. S., Stern, S., & Wu, J. (2019). Foundations of entrepreneurial strategy. *Strategic Management Journal*, 40(5), 736-756.
- 8. Boss, V., Dahlander, L., Ihl, C., & Jayaraman, R. (2021). Organizing entrepreneurial teams: A field experiment on autonomy over choosing teams and ideas. *Organization Science*.
- 9. Boudreau, Kevin J., et al. "A field experiment on search costs and the formation of scientific collaborations." Review of Economics and Statistics 99.4 (2017): 565-576.

#### **SESSION 8**

## **INNOVATION FINANCING**

## Reading

- 1. Hsu, D. H. (2004). What do entrepreneurs pay for venture capital affiliation?. *The journal of finance*, *59*(4), 1805-1844.
- 2. Siegel, J. (2005). Can foreign firms bond themselves effectively by renting US securities laws?. *Journal of Financial Economics*, *75*(2), 319-359.
- Pahnke, E. C., Katila, R., & Eisenhardt, K. M. (2015). Who takes you to the dance? How partners' institutional logics influence innovation in young firms. *Administrative science quarterly*, 60(4), 596-633.
- 4. Howell, S. T. (2017). Financing innovation: Evidence from R&D grants. *American economic review*, *107*(4), 1136-1164.
- 5. Packalen, M., & Bhattacharya, J. (2020). NIH funding and the pursuit of edge science. *Proceedings of the National Academy of Sciences*, *117*(22), 12011-12016.

#### Optional

- 1. Lerner, J., & Nanda, R. (2020). Venture capital's role in financing innovation: What we know and how much we still need to learn. *Journal of Economic Perspectives*, *34*(3), 237-261.
- 2. Fang, L., Lerner, J., Wu, C., & Zhang, Q. (2023). Anticorruption, government subsidies, and innovation: Evidence from China. *Management Science*, *69*(8), 4363-4388.
- 3. Cong, L. W., & Howell, S. T. (2021). Policy uncertainty and innovation: Evidence from initial public offering interventions in China. *Management Science*, *67*(11), 7238-7261.
- 4. Chemmanur, T. J., Loutskina, E., & Tian, X. (2014). Corporate venture capital, value creation, and innovation. *The Review of Financial Studies*, *27*(8), 2434-2473.
- 5. He, J. J., & Tian, X. (2013). The dark side of analyst coverage: The case of innovation. *Journal of Financial Economics*, *109*(3), 856-878.
- 6. Hellmann, T., Lindsey, L., & Puri, M. (2008). Building relationships early: Banks in venture capital. *The Review of Financial Studies*, *21*(2), 513-541.
- 7. Nai, J., Lin, Y., Kotha, R., and Vissa, B. (2021). A Foot in the Door: Field-experiments on Entrepreneurs' Network Activation Strategies for Investor Referrals. Strategic Management Journal.
- 8. Clough, D. R., Fang, T. P., Vissa, B., & Wu, A. (2019). Turning lead into gold: How do entrepreneurs mobilize resources to exploit opportunities?. *Academy of Management Annals*, *13*(1), 240-271.

#### **SESSION 9**

#### **INNOVATION EVALUATION**

#### Reading

- 1. Li, D. (2017). Expertise versus Bias in Evaluation: Evidence from the NIH. American Economic Journal: Applied Economics, 9(2), 60-92.
- 2. Mollick, E., & Nanda, R. (2016). Wisdom or madness? Comparing crowds with expert evaluation in funding the arts. *Management science*, *62*(6), 1533-1553.

- 3. Boudreau, K. J., Guinan, E. C., Lakhani, K. R., & Riedl, C. (2016). Looking across and looking beyond the knowledge frontier: Intellectual distance, novelty, and resource allocation in science. *Management science*, *62*(10), 2765-2783.
- 4. Azoulay, P., Stuart, T., & Wang, Y. (2014). Matthew: Effect or fable?. *Management Science*, *60*(1), 92-109.
- Criscuolo, P., Dahlander, L., Grohsjean, T., & Salter, A. (2017). Evaluating novelty: The role of panels in the selection of R&D projects. *Academy of Management Journal*, 60(2), 433-460.
- 6. Bian, J., Greenberg, J., Li, J., & Wang, Y. (2022). Good to go first? Position effects in expert evaluation of early-stage ventures. *Management science*, *68*(1), 300-315.

## Optional

- 1. Merton, Robert K. "The Matthew Effect in Science: The reward and communication systems of science are considered." Science 159.3810 (1968): 56-63.
- 2. Li, D., & Agha, L. (2015). Big names or big ideas: Do peer-review panels select the best science proposals? *Science*, *348*(6233), 434-438.
- Way, Samuel F., et al. "Productivity, prominence, and the effects of academic environment." Proceedings of the National Academy of Sciences 116.22 (2019): 10729-10733
- 4. Zuckerman, Ezra W. "Construction, Concentration, and (Dis) Continuities in Social Valuations." Annual Review of Sociology 38 (2012): 223-245.
- 5. Benner, M. J., & Ranganathan, R. (2012). Offsetting illegitimacy? How pressures from securities analysts influence incumbents in the face of new technologies. *Academy of Management Journal*, *55*(1), 213-233.
- Benner, M. J., & Ranganathan, R. (2017). Measuring up? Persistence and change in analysts' evaluative schemas following technological change. *Organization Science*, 28(4), 760-780.
- 7. Simcoe, Timothy S., and Dave M. Waguespack. "Status, quality, and attention: What's in a (missing) name?." Management Science 57.2 (2011): 274-290.
- Danziger, S., Levav, J., & Avnaim-Pesso, L. (2011). Extraneous factors in judicial decisions. *Proceedings of the National Academy of Sciences*, 108(17), 6889-6892.
- Feenberg, D., Ganguli, I., Gaule, P., & Gruber, J. (2017). It's good to be first: Order bias in reading and citing NBER working papers. *Review of Economics and Statistics*, 99(1), 32-39.
- Teplitskiy, M., Peng, H., Blasco, A., & Lakhani, K. R. (2022). Is novel research worth doing? Evidence from peer review at 49 journals. *Proceedings of the National Academy of Sciences*, *119*(47), e2118046119.
- 11. Lane, J. N., et al. (2022). Conservatism gets funded? A field experiment on the role of negative information in novel project evaluation. *Management science*, *68*(6), 4478-4495.
- 12. Peterson, A., & Wu, A. (2021). Entrepreneurial learning and strategic foresight. *Strategic Management Journal*, 42(13), 2357-2388.
- 13. Kumar, A., & Operti, E. (2023). Missed chances and unfulfilled hopes: Why do firms make errors in evaluating technological opportunities?. *Strategic Management Journal*.

## SCIENCE, INNOVATION AND ENTRPERENEURSHIP

## Reading

**SESSION 10** 

- 1. Fleming, L., & Sorenson, O. (2004). Science as a map in technological search. *Strategic management journal*, 25(8-9), 909-928.
- Zucker, L. G., Darby, M. R., & Armstrong, J. S. (2002). Commercializing knowledge: University science, knowledge capture, and firm performance in biotechnology. *Management science*, 48(1), 138-153.
- 3. Shane, S. (2000). Prior knowledge and the discovery of entrepreneurial opportunities. *Organization science*, *11*(4), 448-469.
- 4. Stern, S. (2004). Do scientists pay to be scientists?. Management science, 50(6), 835-853.
- 5. Bikard, M. (2020). Idea twins: Simultaneous discoveries as a research tool. *Strategic Management Journal*, *41*(8), 1528-1543.

- 6. Shi, D., Liu, W., & Wang, Y. (2023). Has China's Young Thousand Talents program been successful in recruiting and nurturing top-caliber scientists?. *Science*, *379*(6627), 62-65.
- 7. Fry, C. V. (2023). Bridging the gap: Evidence from the return migration of African scientists. *Organization Science*, *34*(1), 404-432.

## Optional

- 1. Bush, V. (1945). The endless frontier. *National Science Foundation–EUA. Washington*. <u>https://www.nsf.gov/about/history/EndlessFrontier\_w.pdf</u>
- Bikard, M., & Marx, M. (2020). Bridging academia and industry: How geographic hubs connect university science and corporate technology. *Management Science*, 66(8), 3425-3443.
- 3. Kahn, S., & MacGarvie, M. J. (2016). How important is US location for research in science?. *Review of Economics and Statistics*, *98*(2), 397-414.
- 4. Huang, K. G., & Murray, F. E. (2009). Does patent strategy shape the long-run supply of public knowledge? Evidence from human genetics. *Academy of management Journal*, *52*(6), 1193-1221.
- 5. Roach, M., & Cohen, W. M. (2013). Lens or prism? Patent citations as a measure of knowledge flows from public research. Management Science, 59(2), 504-525.
- 6. Sauermann, H., & Roach, M. (2014). Not All Scientists Pay to Be Scientists: PhDs' Preferences for Publishing in Industrial Employment. Research Policy, 43 (1), 32-47.
- 7. Fry, C. V. (2023). Crisis and the trajectory of science: Evidence from the 2014 Ebola outbreak. *Review of Economics and Statistics*, *105*(4), 1028-1038.
- 8. Fry, C., & Furman, J. L. (2023). Migration and Global Network Formation: Evidence from Female Scientists in Developing Countries. *Organization Science*.
- 9. Agrawal, A., & Goldfarb, A. (2008). Restructuring research: Communication costs and the democratization of university innovation. *American Economic Review*, *98*(4), 1578-1590.
- 10. Marx, M., & Fuegi, A. (2020). Reliance on science: Worldwide front-page patent citations to scientific articles. *Strategic Management Journal*, *41*(9), 1572-1594.
- Marx, M., & Hsu, D. H. (2022). Revisiting the entrepreneurial commercialization of academic science: Evidence from "Twin" discoveries. *Management Science*, 68(2), 1330-1352.

## GENDER, INNOVATION AND ENTRPERENEURSHIP

## Reading

**SESSION 11** 

- 1. Ding, W. W., Murray, F., & Stuart, T. E. (2013). From bench to board: Gender differences in university scientists' participation in corporate scientific advisory boards. *Academy of Management Journal*, *56*(5), 1443-1464.
- 2. Thébaud, S. (2015). Business as plan B: Institutional foundations of gender inequality in entrepreneurship across 24 industrialized countries. *Administrative science quarterly*, *60*(4), 671-711.
- 3. Brands, R. A., & Fernandez-Mateo, I. (2017). Leaning out: How negative recruitment experiences shape women's decisions to compete for executive roles. *Administrative Science Quarterly*, *62*(3), 405-442.
- 4. Lerchenmueller, M. J., Sorenson, O., & Jena, A. B. (2019). Gender differences in how scientists present the importance of their research: observational study. *bmj*, *367*.
- Huang, L., Joshi, P., Wakslak, C., & Wu, A. (2021). Sizing up entrepreneurial potential: Gender differences in communication and investor perceptions of long-term growth and scalability. *Academy of Management Journal*, *64*(3), 716-740.
- Koning, R., Samila, S., & Ferguson, J. P. (2021). Who do we invent for? Patents by women focus more on women's health, but few women get to invent. *Science*, 372(6548), 1345-1348.
- 7. Aneja, A., Reshef, O., & Subramani, G. (2023). Attrition and the Gender Innovation Gap: Evidence from Patent Applications. *Working Paper*.

- 1. Ding, W. W., Murray, F., & Stuart, T. E. (2006). Gender differences in patenting in the academic life sciences. *science*, *313*(5787), 665-667.
- 2. Adams, R. B., & Funk, P. (2012). Beyond the glass ceiling: Does gender matter?. *Management science*, *58*(2), 219-235.
- 3. Buser, T., Niederle, M., & Oosterbeek, H. (2014). Gender, competitiveness, and career choices. *The quarterly journal of economics*, *129*(3), 1409-1447.
- 4. Bagues, M., Sylos-Labini, M., & Zinovyeva, N. (2017). Does the gender composition of scientific committees matter?. *American Economic Review*, *107*(4), 1207-1238.
- 5. Greenberg, J., & Mollick, E. (2017). Activist choice homophily and the crowdfunding of female founders. *Administrative Science Quarterly*, *6*2(2), 341-374.
- 6. Kanze, D., Huang, L., Conley, M. A., & Higgins, E. T. (2018). We ask men to win and women not to lose: Closing the gender gap in startup funding. *Academy of Management Journal*, *61*(2), 586-614.
- Kanze, D., Conley, M. A., Okimoto, T. G., Phillips, D. J., & Merluzzi, J. (2020). Evidence that investors penalize female founders for lack of industry fit. *Science Advances*, 6(48), eabd7664.
- 8. Tonoyan, V., Strohmeyer, R., & Jennings, J. E. (2020). Gender gaps in perceived start-up ease: Implications of sex-based labor market segregation for entrepreneurship across 22 European countries. *Administrative Science Quarterly*, *65*(1), 181-225.
- 9. Marx, M. (2022). Employee non-compete agreements, gender, and entrepreneurship. *Organization Science*, *33*(5), 1756-1772.

## SESSIONS 12 & 13 PRESENTATIONS

## ADDITIONAL TOPICS 1 CAN WE TRUST SCIENTISTS? PUBLICATION BIAS, CITATION BIAS, AND REPRODUCIBILITY

- 1. Can we trust scientists? Publication bias, citation bias, and reproducibility
- 2. Ioannidis, John PA. "Why most published research findings are false." PLoS medicine 2.8 (2005): e124.
- 3. Greenberg, Steven A. "How citation distortions create unfounded authority: analysis of a citation network." Bmj 339 (2009).
- 4. Franco, Annie, Neil Malhotra, and Gabor Simonovits. "Publication bias in the social sciences: Unlocking the file drawer." Science 345.6203 (2014): 1502-1505.
- 5. Elson, Malte, Markus Huff, and Sonja Utz. "Metascience on peer review: Testing the effects of a study's originality and statistical significance in a field experiment." Advances in Methods and Practices in Psychological Science 3.1 (2020): 53-65.
- 6. Nosek, Brian A., et al. "Replicability, robustness, and reproducibility in psychological science." Annual review of psychology 73 (2022): 719-748.
- Kahalon, R., Klein, V., Ksenofontov, I., Ullrich, J., & Wright, S. C. (2022). Mentioning the Sample's Country in the Article's Title Leads to Bias in Research Evaluation. *Social Psychological and Personality Science*, *13*(2), 352-361
- Delios, A., Clemente, E. G., Wu, T., Tan, H., Wang, Y., Gordon, M., ... & Uhlmann, E. L. (2022). Examining the generalizability of research findings from archival data. *Proceedings of the National Academy of Sciences*, *119*(30), e2120377119.

# ADDITIONAL TOPICS 2 CAN WE TRUST SCIENTISTS? SPECIAL INTERESTS, FRAUD, RETRACTIONS

- 1. Lucier, Paul. 2020. Can Marketplace Science Be Trusted? *Nature*.
- 2. Holman, Bennett, and Justin Bruner. "Experimentation by industrial selection." *Philosophy of Science* 84.5 (2017): 1008-1019.
- 3. <u>https://fivethirtyeight.com/features/the-easiest-way-to-dismiss-good-science-demand-sound-science/</u>
- 4. Kearns, Cristin E., Laura A. Schmidt, and Stanton A. Glantz. "Sugar industry and coronary heart disease research: a historical analysis of internal industry documents." JAMA internal medicine 176.11 (2016): 1680-1685.
- 5. Ong, Elisa K., and Stanton A. Glantz. "Constructing "sound science" and "good epidemiology": tobacco, lawyers, and public relations firms." *American journal of public health* 91.11 (2001): 1749-1757.
- 6. Bhattacharjee, Yudhijit. "The mind of a con man." *The New York Times* 28 (2013).
- 7. Piller, Charles. "Blots on a field?." Science (New York, NY) 377.6604 (2022): 358-363.
- 8. Jin, Ginger Zhe, et al. "The reverse Matthew effect: Consequences of retraction in scientific teams." *Review of Economics and Statistics* 101.3 (2019): 492-506.