

# Chinese Innovation and Global Integration: Theoretical Framework of Perceived Insecurities in University Technology Transfer

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# About Dr. Clovia Hamilton

- Technology transfer (aka commercialization)
  - Transfer of patentable research results into the commercial marketplace with patent licensing agreements
  - Technology transfer offices (TTO)
- Clovia is a former US Patent and Trademark Office (USPTO) patent examiner
- Registered USPTO patent attorney
- Former technology transfer specialist at the University of IL Urbana Champaign and US Environmental Protection Agency
- Former Director of Intellectual Property at Old Dominion University

# Intellectual Property (IP) Generation

- Business Competition + Innovation = IP generation
- Insecurity in academic exchanges
- Job Insecurity



# Insecurity

- Perceived threats in academic excha
- Faculty researchers ←----- and technology transfer office (TTO) staff



- America's legal regime is aimed toward protecting American IP

# IP Piracy & Counterfeits

- Faculty researchers at the R&D phase



- Perceived threats of IP theft and the marketing/sell of counterfeits threaten academic exchanges

# Counterfeit market

- IP owners have to raise their prices and quality to compete against counterfeit products
- This leads to distrust at the R&D phase



# Technological advantage

- When Chinese multinationals fear losing their technological advantage to counterfeits, they fragment their production among multiple local plants to diminish information flow
- This leads to:
  - Reduction in technology transfer, and
  - Increase in Inefficiencies

# Academic Tenure

- American academic tenure system causes job insecurity
  - Untenured faculty have less independence
  - Participation in university technology transfer may not count toward tenure



# Nature of academic research

- Highly specialized IP is produced
- This creates the need for long term job security (McPherson 1999)

# Impact of tech transfer on academic exchanges

- The researchers that participate in university tech transfer are more insular and dug in (Herder 2011)
- Patenting influences who to work with (Herder 2011)

# Incentives to participate in university tech transfer

1950s Soviet Model of Science	1985 Reform	1992 Science & Tech became integral to competitiveness
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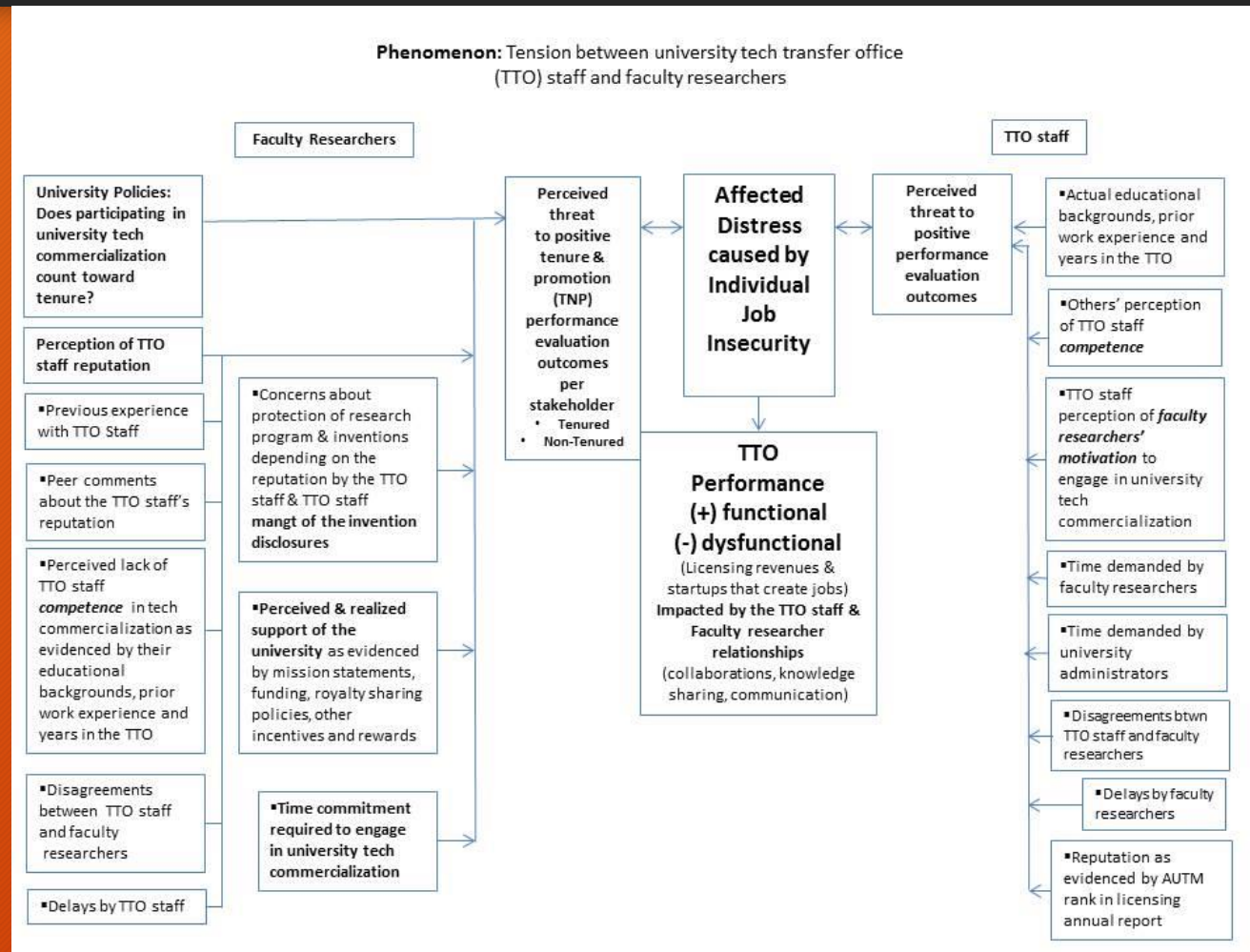
- Yet, there's deficiency in incentives for Chinese to participate in university tech transfer (Gonzalves 2015)
- This is also true in America!
- Incentives include a share in licensing income
  - When faculty researchers can share licensing revenue, there's an increase in university licensing income (Sverke 2002)



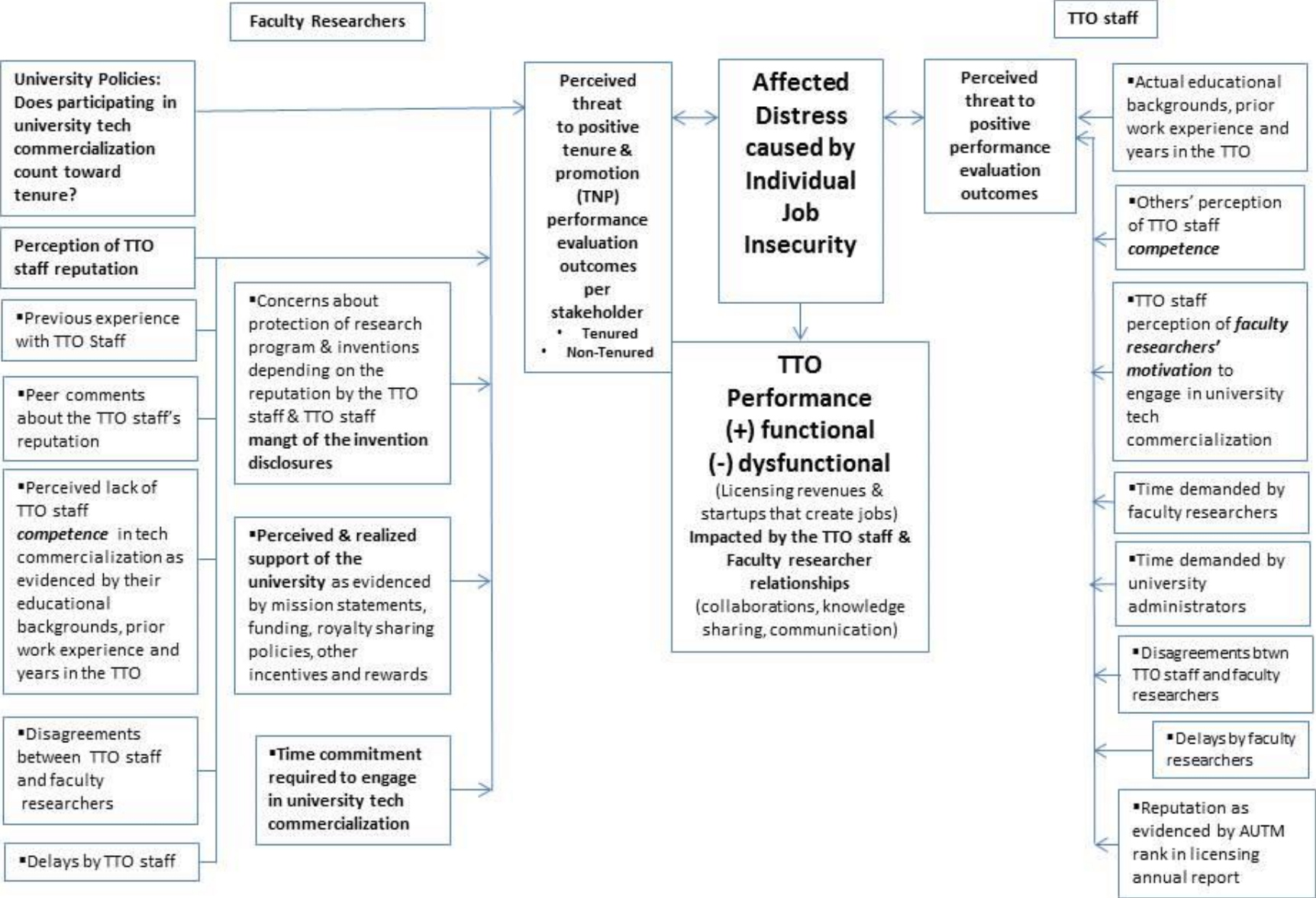
# Reduction in teaching time

- Besides the lack of incentives, it is perceived that participation in university tech transfer will reduce teaching time (Walsh 2005; Sterckx 2011)

# Concept Model for University Tech Transfer Insecurities in Chinese/American academic research exchanges



**Phenomenon:** Tension between university tech transfer office (TTO) staff and faculty researchers





# Academic exchanges between faculty and TTO

## Faculty researchers - variables

- **JOB INSECURITY: PERCEIVED THREATS TO POSITIVE PERFORMANCE OUTCOMES**
  - University policies on what counts toward tenure
  - Perception of TTO staff reputation
  - TTO staff experience
  - Perception of TTO staff competence
  - Disagreements between TTO staff and faculty researchers
  - TTO Staff delays
  - Time commitment
  - University support: mission, funding, royalty sharing
  - Notion of Chinese intellectual property piracy - - cultural differences

# Academic exchanges between faculty and TTO TTO staff- variables

- **JOB INSECURITY: PERCEIVED THREATS TO POSITIVE PERFORMANCE OUTCOMES**
  - TTO education and experience
  - TTO perception of faculty researchers' motivation to engage in university tech commercialization
  - Time demanded by faculty researchers
  - Time demanded by university administrators
  - Disagreements between TTO staff and faculty researchers
  - Delays caused by faculty researchers
  - Association of University Tech Managers (AUTM) licensing annual ranking

# ADD academic exchanges between American and Chinese researchers

- **JOB INSECURITY: PERCEIVED THREATS TO POSITIVE PERFORMANCE OUTCOMES**
  - Perceptions about IP Piracy
  - Perceptions about counterfeits



# Affected distress

- The affected distress caused by individual job insecurity can lead (+) functional or (-) dysfunctional performance
- Can be measured
- Performance indicators
  - IP licensing income
  - Start up business formation

# Additional Research

1. Hamilton, Clovia. "A Novel Method to Grow Emerging Research Institutions Tech Transfer Programs", *International Journal of Technology Management* #.# (2017): pp-pp
2. Hamilton, Clovia. "Machiavelli's The Prince is relevant for modern managers and leaders", *Technology Innovation Management Review* #.# (2017).
3. Hamilton, Clovia. "Righting 7 Wrongs with One Stone: Proposed Pre-Engineering and Academic Intervention Summer Coding Bootcamps", *IEEE Transactions on Education* #.# (2017): pp-pp
4. Hamilton, Clovia. "New Opportunities for March and Simon Analysis of Managerial Cognition in University Technology Transfer from the Attention Based View", *Journal of management studies* #.# (2017): pp-pp
5. Hamilton, Clovia. "The Rise of Intrapreneurs: Toward Increasing Entrepreneurial Spirits", *System Sciences*, 2018. Proceedings of the 36th Annual Hawaii International Conference on. IEEE, 2018.'
6. Hamilton, Clovia. "HBCU Technology Transfer Supply Chain Networks' Sustainability: Budget Resource Planning Tool Development, Proceedings of the International Annual Conference of the American Society for Engineering Management. American Society for Engineering Management (ASEM), 2017.

1. Hamilton, Clovia. "Chinese Innovation and Global Integration - Theoretical Framework of Perceived Insecurities in University Technology Transfer", *Multinational Business Review* #.# (2017): pp-pp  
DUE AUG 15
2. Hamilton, Clovia. "Increasing Diversity Among Women Entrepreneurs in High Growth High Tech", *Diana International Research Conference, Vol. #, 2017.* DUE JUN 30
3. Orthogonal arrays - Rejected by JBV
4. Meta-analysis - Rejected by JTT
5. University tech transfer literature review - Suggested by JTT
6. Black cultural graduations - Targeted for Research in Higher Education

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