



Scopus

**Call for abstracts:**

**The Grey Zones of Innovation. The Illegal and the Informal in Marginal Worlds**

Deadline for abstracts: 31<sup>st</sup> July 2019

Full call available at: <https://tapuya.la/2018/10/04/tapuya-call-for-papers-the-grey-zones-of-innovation-the-illegal-and-the-informal-in-latin-america/>

*Tapuya: Latin American Science, Technology and Society* is a new, peer-reviewed, open access journal, published by Taylor & Francis and recently accepted into Scopus. It is affiliated to ESOCITE and 4S.

Guest Editors:

Óscar Moreno-M, *The University of Edinburgh (UK)*. [oscar.moreno@ed.ac.uk](mailto:oscar.moreno@ed.ac.uk)

Javier Guerrero-C, *Instituto Tecnológico Metropolitano (Colombia)* [javierguerrero@itm.edu.co](mailto:javierguerrero@itm.edu.co)

Javier Guerrero-C, Instituto Tecnológico Metropolitano (Colombia)

**Description**

This special cluster aims to put together works analysing grey processes of illegal and informal innovation in marginal worlds. The objective is to overtake the security and economic approaches to see the kind of knowledge, designs, technologies, techniques, learnings or shrewdness flowing through contexts of illegality and informality. Creativity expressed in workarounds, repair, maintenance, reuse, as well as the production of craft machines and artefacts are crucial for this call. How does the informal or illegal nature influence innovation? How is the illegal and informal related to the legal and formal? How could the type of creativities that emerges in these grey environments be characterized? How is the relationship between production and consumption in these grey areas? How can we overcome the

malevolent, disdained or tropical vision and start seeing the productive and creative dimensions of illegality and informality?

Where does innovation come from? There is a direct link with productive centres such as laboratories, industries, institutes, states, firms, clusters or academia. These spaces have caught much of the scholarly fascination for knowledge and creativity; however, there are other spaces where innovation also occur: the grey zones of illegality and informality. Usually considered as ‘backyards’, these zones represent true breeding grounds for innovation; very often the most arresting practices emerge in these chaotic and dim zones. Latin America, in this sense, has been somewhat of a greyish region: ranked by the World Justice Project as the third region out of seven in adhering to the rule of law, slightly above the Middle East and North Africa (WJP 2018)<sup>1</sup>; classified by the International Monetary Fund as the second shadow economy in the world, just behind the Sub-Saharan Africa (Medina and Schneider 2018)<sup>2</sup>; and listed by the International Labour Organization as a middle-range informal economy region, not too far from the Arab States (ILO 2017, 2018)<sup>3</sup>.

In recent years, innovation in illegal and informal contexts has become a fashionable subject within academia. A noteworthy example of the illegal aspect might be the concept of *outlaw innovation*, suggested by Science, Technology and Innovation Studies (STIS) scholars to describe innovation in hacking activities and online piracy and their relations with intellectual property rights (Schulz and Wagner 2008, Flowers 2008, Maxigas 2017). Another example is *malevolent creativity*, proposed by terrorism studies academics as a conceptual framework to understand the dark nature of creativity and innovation within terrorist organizations (Cropley, Kaufman, and Cropley 2008, Gill et al. 2013, Cropley 2017). Management and informatics researchers introduced the concept of *underground innovation* to analyse the *under the table* initiatives that end up benefiting specific legal markets (Abetti 1997, Mollick 2005). There are also concepts from other disciplines applied to illegal settings; for example *organizational learning* to the way terrorists groups learn (Kenney 2008, Jackson et al. 2005), and

---

<sup>1</sup> *The WJP Rule of Law Index* measures the rule of law based on the experiences and perceptions of the public and in-country experts worldwide. It provides scores and rankings of 113 countries based on eight factors: constraints on government powers, absence of corruption, open government, fundamental rights, order and security, regulatory enforcement, civil justice, and criminal justice (WJP 2018).

<sup>2</sup> The *shadow economy* is also known by other names like *hidden economy*, *grey economy*, *black economy*, *lack economy*, *cash economy* or *informal economy*. “We use the following definition: The shadow economy includes all economic activities which are hidden from official authorities for monetary, regulatory, and institutional reasons.” (Medina and Schneider 2018, 4)

<sup>3</sup> *Informal economy* as a term was introduced at the 2002 International Labour Conference. It refers to “the series of all activities carried out by workers and economic units that are not –in law or in practice–covered or are insufficiently covered by formal agreements” (ILO 2018, 9). According to ILO, the informal sector measurement includes “those working in small and not modern businesses, self-employed workers, excluding university-educated professional people, and those working in domestic service” (ILO 2018, 9).

*communities of practices* to the form outlawed networks work internationally (Bueger 2013, Kenney 2017).

There are more examples from the informal context. *Innovations below the radar*, also from STIS authors, places the debate in terms of innovations for low-income consumers at the bottom of the pyramid produced by emerging markets or particulars in developing countries like China or India (Kaplinsky et al. 2009, Kaplinsky 2011). *Grassroots innovations*, initially conceived by Indian activists and then adopted by Latin American social scientists, aims to empower communities and individuals to transform their ideas into useful products and services by blending science, technology, design and risk capital (Gupta 2013, Hilmi 2012, Cozzens and Sutz 2012). *Frugal Innovation*, moreover, was conceptualized by business research authors from the Indian example and describes the idea of doing more with less “by leveraging limited resources or lacklustre institutions, and to achieve ends that serve more people who have less” (Bhatti and Ventresca 2013, 16, Bhatti, Khilji, and Basu 2013, Hossain, Simula, and Halme 2016)<sup>4</sup>. This idea of *doing more with less* has been formulated with other labels and nuances: the *Jugaad*, for instance, is a Hindi word for “innovative fix; an improvised solution born from ingenuity and cleverness” (Radjou, Prabhu, and Ahuja 2012); the *Shanzhai*, a Chinese word that highlights the non-mainstreams products or the replicas of popular brands where inventiveness and rebellion are mixed to compete with global corporations (Dong and Flowers 2016). And the *inventiveness by necessity* referring to the type of means and knowledge people is forced to look for to solve their practical needs (Usenyuk, Hyysalo, and Whalen 2016).

All these approaches, thankfully, have paved the way to start seeing the illegal and the informal as spaces of knowledge and creativity; an approach that is still incipient in Latin America, notwithstanding the following works; for instance, the setting of an inclusive agenda to research innovations in contexts of informality for building a new development from the south (Cozzens and Sutz 2012, Arocena and Sutz 2012), or the idea of *social technology* as the design and implementation of technologies oriented to social and environmental problems with inclusive and sustainable drives (Thomas 2009), or the recent efforts to analyse drug-trafficking and guerrilla warfare as spaces of knowledge and creativity (Guerrero-C 2017, Moreno-M 2018). However, the academic approach does not match real practices. Despite the many instances, forms and places in which these grey zones take shape, and the different

---

<sup>4</sup> Similar concepts are *pro-poor innovation*, *innovation oriented to social inclusion*, *inclusive innovation*, *reverse innovation* or *disruptive innovation* (Ramani, SadreGhazi, and Duysters 2010, Arocena and Sutz 2012, Bianchi et al. 2013, Govindarajan and Trimble 2012, George, McGahan, and Prabhu 2012, Markides 2006, Guttentag 2015).

uses, subsistence, resistances or antagonisms, the analysis has been mostly from security and economic perspectives. It seems that authors enjoy giving recommendations to improve security or to fight against the banned; they appear to be concerned about measuring impacts of the informal economy in relation to poverty and development. Most of those studies have not problematized illegal/informal innovations either. Studying grey innovations is an invitation to consider the divides between legal/illegal and their relationship with the regulatory spaces in which such divides are enacted (Abraham and van Schendel 2005).

Drawing upon STIS perspectives, we suggest that there are three ways to approach the grey zones of innovation. Firstly, the user-driven innovation literature. STIS scholars have fully documented the active role of users/using in innovation (Von Hippel 1976, Cowan 1983, Pinch and Bijker 1987, Woolgar 1990, Fischer 1992, Fleck 1993, Edge and Williams 1996, Kline and Pinch 1996, Edgerton 1999, Oudshoorn and Pinch 2003, Von Hippel 2005, Hyysalo 2010). How the classic designer-user or producer-consumer matrix apply to the clandestine, violent or unregulated conditions? Secondly, the local character of knowledge/technology-making. Historians of colonialism/imperialism, historians of technology and feminists' scholars have showed how local peripheries produced knowledges, technologies and innovations (Headrick 1981, Bijker, Hughes, and Pinch 1987, Haraway 1988, Harding 1992, MacLeod 1993, Chambers and Gillespie 2000, Arnold 2005, Raj 2007, Edgerton 2007, Thomas 2009, Tilley 2011, Herrera 2011, Burbano 2012). How these knowledges, creativities or techniques work in what we call the *periphery of the periphery* (not only the poor periphery but the illegal/informal in the poor periphery), and how they are connected to the global? Thirdly, the artisans/practitioners/technician's labour literature (Mayor 1997, Sennett 2008, Bridenbaugh 2012, Long 2015). How the craft work operates in illegality and informality and the way it relates with the logics of the legal/licit market?

### **Potential themes**

- Historical sociologies of innovative processes in which illegal or informal knowledges, designs, creativities, techniques, technologies, learnings or practices are definitive in Latin American and other geographies in the global south.
- Theoretical and empirical discussions about how the illegal and informal nature changes innovation in Latin American and other geographies in the global south.
- Theoretical and empirical discussions about the relationships between regulatory spaces and the construction of illegality and informality in the process of innovation in Latin American and other geographies in the global south.

- Theoretical explorations on the general ideas of *illegal innovation* or *informal innovation*.
- Methodological reflexions on how to research illegal and informal spaces in Latin American and other geographies in the global south.

### Practical information

Your proposal should consist of an abstract (ca. 300 words) and a brief biographical note (ca. 100 words). Please submit abstracts to Oscar Moreno-M ([oscar.moreno@ed.ac.uk](mailto:oscar.moreno@ed.ac.uk)) and Javier Guerrero-C ([javierguerrero@itm.edu.co](mailto:javierguerrero@itm.edu.co)) with the subject "Grey Zones Innovation". If accepted, full 8000-word drafts would be due **July 2019**. This thematic cluster is planned to be published between late 2019 and early 2020.

### References

- Abetti, Pier. 1997. "Underground Innovation in Japan: the Development of Toshiba's Word Processor and Laptop Computer." *Creativity and Innovation Management* 6 (3):127-139.
- Abraham, Itty, and Willem van Schendel. 2005. "Introduction, The Making of Illicitness." In, edited by Itty Abraham and Willem van Schendel, 1-37. Bloomington and Indianapolis: Indiana University Press.
- Arnold, David. 2005. "Europe, Technology, and Colonialism in The 20th Century." *History and technology* 21 (1):85-106.
- Arocena, Rodrigo, and Judith Sutz. 2012. "Research and innovation policies for social inclusion: an opportunity for developing countries." *Innovation and Development* 2 (1):147-158.
- Bhatti, Yasser, Shaista Khilji, and Radha Basu. 2013. "Frugal innovation." In *Globalization, Change and Learning in South Asia*, edited by Shaista Khilji and Chris Rowley. Oxford: Chandos Publishing.
- Bhatti, Yasser, and Marc Ventresca. 2013. "How can 'frugal innovation' be conceptualized?" *Saïd Business School Working Paper Series*.
- Bianchi, Carlos, Melissa Ardanche, Mariela Bianco, and Marcela Schenck. 2013. "Inclusive innovation and policy mismatch in Health Care. A Uruguayan local experience." *Conferência Internacional LALICS 2013*.
- Bijker, Wiebe, Thomas Hughes, and Trevor Pinch, eds. 1987. *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*. Cambridge and London: MIT Press.
- Bridenbaugh, Carl. 2012. *The Colonial Craftsman*: Courier Corporation.
- Bueger, Christian. 2013. "Practice, Pirates and Coast Guards: The Grand Narrative of Somali Piracy." *Third World Quarterly* 34 (10):1811-1827.
- Burbano, Andrés. 2012. "Inventions at the Borders of History. Re-significance of Media Technologies From Latin America." PhD in Media Arts and Technology, University of California.
- Chambers, David, and Richard Gillespie. 2000. "Locality in the History of Science: Colonial Science, Technoscience, and Indigenous Knowledge." *Osiris* 15:221-240.
- Cowan, Ruth Schwartz. 1983. *More Work for Mother: The Ironies of Household Technology from the Open Hearth to the Microwave*. New York: Basic Books.

- Cozzens, Susan, and Judith Sutz. 2012. *Innovation in Informal Settings: A research agenda*. edited by the Canadian International Development Research Centre. Available at [//pdfs.semanticscholar.org/1471/747a03dcd0c6ec9e76181b5f8f08d38ca346.pdf](https://pdfs.semanticscholar.org/1471/747a03dcd0c6ec9e76181b5f8f08d38ca346.pdf).
- Cropley, David. 2017. "The dark side of creativity." In *The Elgar Companion to Innovation and Knowledge Creation*, edited by Harald Bathelt, Patrick Cohendet, Sebastian Henn and Laurent Simon. Cheltenham, UK: Edward Elgar Publishing.
- Cropley, David, James Kaufman, and Arthur Cropley. 2008. "Malevolent creativity: A functional model of creativity in terrorism and crime." *Creativity Research Journal* 20 (2):105-115.
- Dong, Ming, and Stephen Flowers. 2016. "Exploring innovation in Shanzhai: the case of mobile phones." *Asian Journal of Technology Innovation* 24 (2):234-253.
- Edge, David, and Robin Williams. 1996. "The social shaping of technology." *Research policy* 25 (6):865-899.
- Edgerton, David. 1999. "From Innovation to Use: Ten Eclectic Theses on The Historiography of Technology." *History and Technology, an International Journal* 16 (2):111-136.
- Edgerton, David. 2007. "Creole Technologies and Global Histories: Rethinking How Things Travel in Space and Time." *History of Science and Technology* 1:75-112.
- Fischer, Claude. 1992. *America Calling: A Social History of the Telephone to 1940*. Berkeley: University of California Press.
- Fleck, James. 1993. "Innofusion: Feedback in the innovation process." In *Systems Science. Addressing Global Issues*, edited by Frank Stowell, Daune West and James Howell. New York: Plenum Press and Springer.
- Flowers, Stephen. 2008. "Harnessing the hackers: The emergence and exploitation of Outlaw Innovation." *Research Policy* 37 (2):177-193.
- George, Gerard, Anita McGahan, and Jaideep Prabhu. 2012. "Innovation for Inclusive Growth: Towards a Theoretical Framework and a Research Agenda." *Journal of Management Studies* 49 (4):661-683.
- Gill, Paul, John Horgan, Samuel Hunter, and Lily Cushenbery. 2013. "Malevolent creativity in terrorist organizations." *The Journal of Creative Behavior* 47 (2):125-151.
- Govindarajan, Vijay, and Chris Trimble. 2012. *Reverse innovation: Create far from home, win everywhere*: Harvard Business Press.
- Guerrero-C, Javier. 2017. "Maritime Interdiction in The War on Drugs in Colombia: Practices, Technologies and Technological Innovation." *Science, Technology and Innovation Studies*, The University of Edinburgh.
- Gupta, Anil. 2013. "Tapping the entrepreneurial potential of grassroots innovation." *Stanford Social Innovation Rev* 11 (3):18-20.
- Guttentag, Daniel. 2015. "Airbnb: Disruptive Innovation and The Rise of an Informal Tourism Accommodation Sector." *Current Issues in Tourism* 18 (12):1192-1217.
- Haraway, Donna. 1988. "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective." *Feminist Studies* 14 (3):575-599.
- Harding, Sandra. 1992. "Rethinking standpoint epistemology: What is" strong objectivity?." *The Centennial Review* 36 (3):437-470.
- Headrick, Daniel 1981. *The Tools of Empire: Technology and European Imperialism in the Nineteenth Century*. New York: Oxford University Press
- Herrera, Alexander 2011. *La Recuperación de Tecnologías Indígenas: Arqueología, Tecnología y Desarrollo en los Andes*. Perú: Instituto de Estudios Peruanos.
- Hilmi, Mohd Faiz. 2012. "Grassroots Innovation from the Bottom of the Pyramid." *Current Opinion in Creativity, Innovation and Entrepreneurship* 1 (2).
- Hossain, Mokter, Henri Simula, and Minna Halme. 2016. "Can frugal go global? Diffusion patterns of frugal innovations." *Technology in Society* 46:132-139.

- Hyysalo, Sampsa. 2010. *Health Technology Development and Use. From Practice-Bound Imagination to Evolving Impacts*. London (UK) and New York (USA): Routledge.
- ILO, International Labour Organization. 2017. *Thematic Labour Overview. Transition to Formality in Latin America and the Caribbean*. Perú: International Labour Organization.
- ILO, International Labour Organization. 2018. *Women and Men in the Informal Economy: A Statistical Picture*. Geneva: International Labour Organization.
- Jackson, Brian, John Baker, Kim Cragin, John Parachini, Horacio Trujillo, and Peter Chalk. 2005. *Aptitude for Destruction. Organizational Learning in Terrorist Groups and Its Implications for Combating Terrorism*. . Vol. 1. Santa Monica: RAND Corporation.
- Kaplinsky, Raphael. 2011. "Schumacher meets Schumpeter: Appropriate technology below the radar." *Research Policy* 40 (2):193-203.
- Kaplinsky, Raphael, Joanna Chataway, Norman Clark, Rebecca Hanlin, Dinar Kale, Lois Muraguri, Theo Papaioannou, Peter Robbins, and Watu Wamae. 2009. "Below the radar: what does innovation in emerging economies have to offer other low-income economies?" *International Journal of Technology Management & Sustainable Development* 8 (3):177-197.
- Kenney, Michael. 2008. "Organizational Learning and Islamic Militancy." *NIJ Journal* (265):18-21.
- Kenney, Michael. 2017. "A Community of True Believers: Learning as Process Among "The Emigrants"." *Terrorism and Political Violence*:1-20. doi: 10.1080/09546553.2017.1346506.
- Kline, Ronald, and Trevor Pinch. 1996. "Users as agents of technological change: The social construction of the automobile in the rural United States." *Technology and Culture* 37 (4):763-795.
- Long, Pamela. 2015. *Artisan/Practitioners and the Rise of the New Sciences, 1400–1600*. Vol. 11. Corvallis: Oregon State University Press.
- MacLeod, Roy. 1993. "Passages in Imperial Science: From Empire to Commonwealth." *Journal of World History*:117-150.
- Markides, Constantinos. 2006. "Disruptive Innovation: In Need of Better Theory." *Journal of Product Innovation Management* 23 (1):19-25.
- Maxigas. 2017. "Hackers against technology: Critique and recuperation in technological cycles." *Social Studies of Science* 47 (6):841-860.
- Mayor, Alberto. 1997. *Cabezas Duras y Dedos Inteligentes: Estilo de Vda y Cultura Técnica de los Artesanos Colombianos del Siglo XIX*: Instituto Colombiano de Cultura.
- Medina, Leandro, and Friedrich Schneider. 2018. "Shadow Economies Around the World: What Did We Learn Over the Last 20 Years?" *IMF Working Paper*.
- Mollick, Ethan. 2005. "Tapping Into the Underground." *MIT Sloan Management Review* 46 (4):21.
- Moreno-M, Oscar. 2018. "Innovations in Illegality. Violent and Health Knowledges in The FARC-EP." Doctoral Thesis, Politics and International Relations, The University of Edinburgh (Unpublished Work).
- Oudshoorn, Nelly, and Trevor Pinch, eds. 2003. *How Users Matter: The Co-Construction of Technologies and Users*. Cambridge, MA: MIT Press.
- Pinch, Trevor, and Wiebe Bijker. 1987. "The Social Construction of Facts and Artifacts." In *The Social Construction of Technological Systems*, edited by Wiebe Bijker, Thomas Hughes and Trevor Pinch. Cambridge, MA and London, EN: MIT Press.
- Radjou, Navi, Jaideep Prabhu, and Simone Ahuja. 2012. *Jugaad innovation: Think frugal, be flexible, generate breakthrough growth*: John Wiley & Sons.
- Raj, Kapil. 2007. *Relocating Modern Science: Circulation and the Construction of Knowledge in South Asia and Europe, 1650-1900*: Palgrave Macmillan Basingstoke.

- Ramani, Shyama, Shuan SadreGhazi, and Geert Duysters. 2010. "On the delivery of pro-poor innovations: managerial lessons from sanitation activists in India." *Maastricht Economic and Social Research Institute on Innovation and Technology Working Paper*.
- Schulz, Celine, and Stefan Wagner. 2008. "Outlaw Community Innovations." *International Journal of Innovation Management* 12 (03):399-418.
- Sennett, Richard. 2008. *The Craftsman*: Yale University Press.
- Thomas, Hernán. 2009. "De las Tecnologías Apropriadas a las Tecnologías Sociales. Conceptos/Estrategias/Diseños/Acciones." Primera Jornada sobre Tecnologías Sociales, , Buenos Aires.
- Tilley, Helen. 2011. *Africa as a Living Laboratory: Empire, Development, and the Problem of Scientific Knowledge, 1870-1950*: University of Chicago Press.
- Usenyuk, Svetlana, Sampsa Hyysalo, and Jack Whalen. 2016. "Proximal Design: Users as Designers of Mobility in the Russian North." *Technology and Culture* 57 (4):866-908.
- Von Hippel, Eric. 1976. "The Dominant Role of Users in the Scientific Instrument Innovation Process." *Research Policy* 5 (3):212-239.
- Von Hippel, Eric. 2005. *Democratizing Innovation*. Cambridge, MA: MIT Press.
- WJP, The World Justice Project. 2018. *The World Justice Project. Rule of Law Index 2017-2018*: World Justice Project.
- Woolgar, Steve. 1990. "Configuring the User: the Case of Usability Trials." *The Sociological Review* 38 (S1):58-99.