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CODING AGAINST CULTURE: ON LANGUAGE, THEORY AND EXPERTISE IN THE ALGORITHMIC CONSTRUCTION OF IDENTITY

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Data mining algorithms are fast replacing traditional social sorting mechanisms in creating, recreating and reifying social identities (Lyon, 2003; Willson, 2013; Zarsky, 2002), and are now used to sort people in a growing variety of fields – banking, insurance, education and more (Kennedy, 2016; Kockelman, 2013; O’Neil, 2016). But while previous social sorting mechanisms have predominantly relied on different theories (or lay theories) to supply the basic discursive, theoretical and lingual building blocks for identity construction, algorithmic classification often lacks a theoretical and lingual base, and is accordingly seen as beyond interpretation or explanation (Hallinan & Striphos, 2014); beyond symbols or discourse (Gillespie, 2014), and hence, as a post-hegemonic (Beer, 2009; Lash, 2007) or post-textual (Andrejevic, Hearn, & Kennedy, 2015) way of government.

However, algorithms depend on the people who design and use them, and are the result of constant interactions between human actors and computer code (Bucher, 2012; Crawford, Miltner, & Gray, 2014; Morris, 2015). Therefore, theory, language and expertise still play a role in the creation and implementation of such algorithms. But what role do they play? What kinds of theories take part in algorithmic sorting, in the algorithmic construction of identities? Are "human technologies" (Rose & Miller, 2008), such as psychology or sociology, still needed in the process of sorting people, or are such experts replaced by mathematicians and engineers? Moreover, what role does language play in algorithmic sorting? And, if language *is* involved, does the use of lingual categories shed light onto algorithmic black boxes (Driscoll, 2014; Leese, 2014; Pasquale, 2015), or is it merely another measure of obfuscation?

Relying on an ethnographic study of the Israeli data analytics' scene and on 40 semi-structured interviews with Israeli data scientists, this paper offers a closer look at the epistemic amalgam of algorithmic profiling, and at the changing role of expert knowledge, theory and language in the algorithmic construction of identities. The paper aims to show that, while language and expertise are often described (by programmers and critical thinkers alike) as superfluous to algorithmic sorting, they still play an important role in this process. Accordingly, while algorithms can produce new and often

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countless types of human categories, far beyond the known demographic or psychological ones (Rogers, 2009), such traditional categories still play a central role in algorithmic sorting, albeit one dramatically different than before.

References

- Andrejevic, M., Hearn, A., & Kennedy, H. (2015). Cultural studies of data mining: Introduction. *European Journal of Cultural Studies*, 18(4–5), 379–394. <http://doi.org/10.1177/1367549415577395>
- Beer, D. (2009). Power through the Algorithm? Participatory Web Cultures and the Technological Unconscious. *New Media & Society*, 11(6), 985–1002. <http://doi.org/10.1177/1461444809336551>
- Bucher, T. (2012). Want to Be on the Top? Algorithmic Power and the Threat of Invisibility on Facebook. *New Media & Society*, 14(7), 1164–1180. <http://doi.org/10.1177/1461444812440159>
- Crawford, K., Miltner, K., & Gray, M. L. (2014). Critiquing Big Data : Politics , Ethics , Epistemology. *International Journal of Communication*, 8, 1663–1672.
- Driscoll, K. (2014). Working Within a Black Box : Transparency in the Collection and Production of Big Twitter Data, 8(1243170), 1745–1764.
- Gillespie, T. (2014). The Relevance of Algorithms. In K. Gillespie, T; Boczkowski, P.; Foot, K. (Ed.), *Media Technologies*. Cambridge, MA: MIT Press.
- Hallinan, B., & Striphas, T. (2014). Recommended for you: The Netflix Prize and the Production of Algorithmic Culture. *New Media & Society*, 1461444814538646-. <http://doi.org/10.1177/1461444814538646>
- Kennedy, H. (2016). *Post, Mine, Repeat*. London: Palgrave Macmillan UK.
- Kockelman, P. (2013). The Anthropology of an Equation. Sieves, Spam filters, Agentive Algorithms, and Ontologies of Transformation. *HAU: Journal of Ethnographic Theory*, 3(3), 33–61.
- Lash, S. (2007). Power after Hegemony: Cultural Studies in Mutation? *Theory, Culture & Society*, 24(3), 55–78. <http://doi.org/10.1177/0263276407075956>
- Leese, M. (2014). The New Profiling: Algorithms, Black Boxes, and the Failure of Anti-Discriminatory Safeguards in the European Union. *Security Dialogue*, 45(5), 494–511. <http://doi.org/10.1177/0967010614544204>
- Lyon, D. (2003). Surveillance as Social Sorting. In *Surveillance as Social Sorting: Computer Codes and Mobile Bodies* (pp. 13–31). New York: Routledge.
- Morris, J. W. (2015). Curation by Code: Infomediaries and the Data Mining of Taste. *European Journal of Cultural Studies*, 18(4–5), 446–463. <http://doi.org/10.1177/1367549415577387>
- O’Neil, C. (2016). *Weapons of Math Destruction: How big data increases inequality and threatens democracy*. New York: Crown Publishing Group.
- Pasquale, F. (2015). *The Black Box Society*. Cambridge, MA: Harvard University Press.

- Rogers, R. (2009). Post-Demographic Machines. In A. Dekker & A. Wolfsberger (Eds.), *Walled Garden* (pp. 29–39). Amsterdam: Virtueel Platform.
- Rose, N., & Miller, P. (2008). *Governing the Present: Administering Economic, Social and Personal Life*. Retrieved from <http://eprints.lse.ac.uk/21097/>
- Rouvroy, A. (2013). The End(s) of Critique : Data-Behaviourism vs. Due-process. In M. Hildebrandt & K. De Vries (Eds.), *Privacy, Due Process and the Computational Turn: The Philosophy of Law Meets the Philosophy of Technology* (pp. 1–19). Milton Park and New York: Routledge.
- Willson, M. (2013). The Politics of Social Filtering. *Convergence: The International Journal of Research into New Media Technologies*.
<http://doi.org/10.1177/1354856513479761>
- Zarsky, T. Z. (2002). Mine Your Own Business: Making the Case for the Implications of the Data Mining of Personal Information in the Forum of Public Opinion. *Yale Journal of Law and Technology*, (5), 1–57.