

Doing illness with numbers. How apps promote medicalization in the mental sphere

Antonio Maturo¹, Veronica Moretti¹

¹ University of Bologna, Strada Maggiore. 45, 40125

Bologna, Italy

{antonio.maturo2@unibo.it, veronica.moretti4@unibo.it,

Abstract. This article proposes the hypothesis that apps used to self-track different aspects of mental health promotes medicalization. Individuals are seen as responsible for their personal health, while the importance of social determinants is marginalized. Mental health is the most medicalized sphere likely because of the quantification of the diagnosis fostered by the DSM (numbers and length of symptoms). The “quantified self” acts on reality with the conviction that a data-driven life can enhance one's health status. The mechanisms that foster this attitude are gamification and quantification – two central features of health apps.

Conrad defines medicalization as the "process by which a non-medical problem is defined as though it were a medical problem or rather, in most cases, as a sickness or a disorder" (2007, p. 4). It is hard to deny that our society is becoming more and more medicalized. Numerous conditions which were once considered "normal" are now considered pathological. To say it in a more ironic way: "Once upon a time, plenty of children were unruly, some adults were shy, and bald men wore hats. Now all of these descriptions might be attributed to diseases – entities with names, diagnostic criteria, and an increasing array of therapeutic options" (McLellan, 2007, p. 627). Typically, medicalization has been promoted by the medical community. In addition to the medical community, Conrad points out other engines of medicalization: BigPharma, technology, Managed Care and consumers. In the realm of mental health it can be stated that the *Diagnostic and Statistical Manual of Mental Disorders* (DSM) has been – and still is – a powerful driver of medicalization.

It can be affirmed that the apps for mindfulness, anxiety and wellbeing foster a medicalized view of the mental health. To demonstrate this hypothesis we carried out a content-based analysis of 12 apps¹ – all of them available on Google and Apple Store. These apps give rise to a neoliberal discourse in which the subject is understood as a self-entrepreneur responsible for her own performance and productivity. To use a glamorous expression, the “quantified self” acts on reality with

¹ The results of the research are presented in an article currently under review for the journal *Studies of Social Justice*. The authors are: Antonio Maturo, Luca Mori, Veronica Moretti.

the conviction that a data-driven life can enhance one's health status. The mechanisms that foster this attitude are quantification and gamification – two central features of health apps. Moreover, the algorithmic structure of the diagnosis provided by the DSM fits perfectly into the apps for mental health.

We demonstrated this through a content analysis of health/wellness apps focused on two different kinds of texts: the description provided by the app itself and the reviews written by its users. Our investigation of the material revealed that these types of apps are giving rise to an idea of the subject which is completely separated from social factors (Lupton, 2014). As a result, this de-politicization of health brought about by the apps strengthens the neoliberal idea of health as an individual responsibility, marginalizing any discourse on social justice.

The apps for mental health are perfectly shaped and tailored for the quantification of everyday life. Quantification is a central theme in STS studies, but not very much studied in mainstream sociology (de Otis, Neresini, 2016). Despite being a constitutive feature of social organization: “sociologists have been reluctant to investigate it (quantification) as a social phenomenon in its own right” (Espeland and Stevens, 2008, p. 402). This might be because: “In a world saturated with numbers, it is easy to take the work of quantification for granted” (Espeland and Stevens, 2008, p. 411). For this reason, Espeland and Stevens (2008) propose a sociology of quantification that analyses the evolution and the impact of quantification on social life in contemporary society. Today, the State, large bureaucracies, corporations, the stock exchange and research centers base their actions on statistics, measurements and calculations. Rankings, cost-benefit analyses and audits are created more today than ever before, making expertise and rigorous methodologies necessary. Moreover, “an expanding consulting industry provides examples of how numbers can constrain discretion and hold people accountable” (Espeland and Stevens, 2008, p. 420). This is linked to the idea that society is structured as a “world of scores rather than classes” (Fourcade and Healy, 2013, p. 568). Individual scores open and close social gates and strongly affect economic opportunities and life-trajectories. In the neoliberal economy: “market institutions increasingly use actuarial techniques to split and sort individuals into *classification situations* that shape life-chances” (Fourcade and Healy, 2013, p. 559). In the US, scoring technologies quantify credit risk: a number which is as important for the destiny of an individual as titles of nobility were during the medieval period because they determine one's access to credit. As such the system invites individuals to become “calculating selves” (Miller, 1992) capable of modifying and controlling the parameters determining their score through continuous and rigorous self-surveillance. In other words, quantification allows the creation of standards, uniformity and classifications to which we are softly pushed to adhere. As Timmermans and Epstein put it: “Under neoliberal policies in globalizing economies, market and nonmarket actors thus rely increasingly on standards to manage reputations” (2010, p. 77). Once quantification algorithms become codified and routinized their products are “reified” and become “real” (Desrosières, 2011).

Our study starts with the quantification theme, which is the important role of measurements on apps. Namely, the self-tracking modalities, the possibilities of analysing data, the existence of different levels of difficulty or commitment, the production of number-based graphics and the building of rankings. Many mobile

applications which can evaluate a lot of parameters linked to the wellbeing can be currently downloaded.

The conception of mental disorder established by the DSM fits perfectly with the quantification *Weltanschauung*. Disorders are defined on the basis of the number and the duration of symptoms. Typically the formula is: “Five (or more) of following symptoms have been present during the same 2-week period...” (Horwitz and Wakefield, 2007, p. 105). The DSM is the commonly used basis for any mental disorder diagnosis. While the first two editions of the DSM were characterized by a strong theoretical view, mainly based on psychoanalysis, DSM-III and, even more, DSM-IV and DSM-V try to be ‘atheoretical’ and symptom-based.

We should note that many practices of quantification – when examined alone – can be very boring. It is not so exciting to enter data about your mood twice a day or write everyday at 8 pm why you feel down on your smartphone – after we received a memo from our app. According to marketers there is a method to successfully doing boring activities: make these activities fun. And this is exactly what gamification is: “Gamification, a term that derives from behavioural economics, refers to the use of game mechanics in traditionally nongame activities.” (Jagoda, 2013, p. 113). Within the framework of the quantified self, gamification has both a cognitive and a performative character/aspect. It allows us to do things with less effort. For example, we are able to run more if an app makes us believe we are being chased by zombies. Of course, the use of incentives to aid in the realization of goals is nothing new. However within the context of digital technologies, gamification is associated with an enormous potential to quantify, store and analyze data. In addition, gamification establishes a form of self-discipline based on the “voluntary” internalization of practices which serve and are coherent with a regime of economic neoliberalism (Maturó and Setiffi, 2016).

Gamification elements can be found both in the features and in the functions of this app. The meditation path includes interactive characters and the graphics is very functioning. Some reviews show, a tendency to prefer applications which, besides having curative aims, also present fun and pleasant features. Moreover, if the user succeeds in meditating for many days in a row, it gains a reward. For instance, for 15 days streak on Headspace, you got a voucher for 1 month free access.

To conclude it can be said that apps for mental health outline an individualised subject, that is separated from any social determinants of health, moreover apps for mental health confirm the "quantitative" and reductionist approach to mental illness (that is, mental illness as a syndrome based on quantity and duration of symptoms), as advanced by the last three versions of the DSM, therefore promoting medicalization. Some apps for health can work as self-help devices which favour therapy culture (Furedi, 2004) and a tendency to pathologise normal aspects of everyday life (sadness, mood swings, anxiety)².

More precise results and a thick description of the methodology are presented in the article under review mentioned in the previous footnote.

References

1. Conrad, P.: *The medicalization of society: On the transformation of human conditions into treatable disorders*. Johns Hopkins University Press, Baltimore (2007)
2. de Leonardis O., Neresini F.: Introduzione. Il potere dei grandi numeri. *Rassegna Italiana di Sociologia*. 371-378 (2016)
3. Desrosiers, A.: Buono o cattivo? Il ruolo del numero nel governo della città neoliberale. *Rassegna Italiana di Sociologia*. LII/3, 373-397 (2011)
4. Espeland, W. N., Stevens, M. L.: A sociology of quantification. *European Journal of Sociology*. 49(3), 401-436 (2008)
5. Fourcade M, Healy K.: Classification situations: Life-chances in the neoliberal era. *Accounting, Organizations and Society*. 38, 559-572 (2013)
6. Furedi F.: *Therapy culture*. Routledge, London (2004)
7. Horwitz I., Wakefield J.: *The Loss of Sadness: How Psychiatry Transformed Normal Sorrow Into Depressive Disorder*. Oxford University Press, New York (2007).
8. Jagoda, P.: Gamification and Other Forms of Play. *Boundary 2*. 40(2), 113-144 (2013)
9. Lupton D.: Apps as artefacts: Towards a critical perspective on mobile health and medical apps. *Societies*. 4(4), 606-622 (2014)
10. Maturo A., Setiffi F.: The gamification of risk: how health apps foster self-confidence and why this is not enough. *Health, Risk & Society*. 17(7-8), 477-494 (2016)
11. McLellan F.: Medicalisation: A Medical Nemesis. *The Lancet*. 369, 627- 628 (2007)
12. Miller, P.: Accounting and Objectivity: The Invention of Calculating Selves and Calculable Spaces. *Annals of Scholarship*. 9 (1/2), 61-86 (1992)
13. Timmermans, S., Epstein, S.: A World of Standard but not a Standard World: Toward a Sociology of Standards and Standardization. *Annual Review of Sociology*. 36, 69-89 (2010)