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**The becoming-methadone-body:**

**On the onto-politics of health intervention translations**

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**ABSTRACT**

In this paper, we reflect on health intervention translations as matters of their implementation practices. Our case is methadone treatment, an intervention promoted globally for treating opioid dependence and preventing HIV among people who inject drugs. Tracing methadone’s translations in high security prisons in the Kyrgyz Republic, we notice the multiple methadones made possible, what these afford, and the onto-political effects they make. We work with the idea of the ‘becoming-methadone-body’ to trace the making-up of methadone treatment and its effects as an intra-action of human and nonhuman substances and bodies. Methadone’s embodied effects flow beyond the mere psycho-activity of substances incorporating individual bodies, to material highs and lows incorporating the governing practices of prisoner society. The methadone-in-practice of prisoner society is altogether different to that imagined as being in translation as an intervention of HIV prevention and opioid treatment, and has material agency as a practice of societal governance. Heroin also emerges as an actor in these relations. Our analysis troubles practices of ‘evidence-based’ intervention and ‘implementation science’ in the health field, by arguing for a move towards ‘evidence-making’ intervention approaches. Noticing the onto-politics of health intervention translations invites speculation on how intervening might be done differently.

**KEYWORDS**

Methadone; Kyrgyzstan; Ontological politics; Implementation science; Evidence-making intervention

**INTRODUCTION**

Methadone treatment is an opioid agonist therapy (hereafter, methadone treatment) used in treating opioid dependence. It is also promoted among global health networks as one of the best evidenced HIV prevention interventions for people who inject drugs. Systematic and meta-analytic reviews link methadone treatment to reductions in drug injecting and HIV risk practices as well as HIV transmissions (McArthur et al., 2012; Degenhardt et al., 2012). Such discourses of evidence-based intervention emphasise universal effect potential. Accordingly, there are coordinated efforts to translate methadone treatment as an intervention for treating opioid dependence and for preventing HIV internationally (World Health Organization, 2013). Global indicators of coverage map how this intervention travels (Larney et al., 2017). The translation of methadone treatment might therefore be imagined in evidence-based intervention approaches as an ‘immutable mobile’ (Latour, 2005); an intervention or technology which adapts through its translation from one network to another but without changing its overall purpose or effect potential. Implementing evidenced interventions into new settings in the field of public health is a ‘complex problem’, involving adaptations of interventions-in-context (Campbell et al., 2007; Hawe et al., 2009; Mowles, 2014). Implementation science has recently emerged as the set of multidisciplinary research practices designed to ‘bridge’ apparent ‘gaps’ between evidence and practice as a means to optimizing intervention translations (Peters et al., 2013; Madon et al., 2007). There is a general shift in implementations research towards acknowledging implementation as a messy, contingent and complex problem that is made *in* practices (Wood et al., 1998; Greenhalgh and Wieringa, 2011; May et al., 2016).

In this paper, we consider the translations of methadone treatment among people who inject drugs in prison settings in the Kyrgyz Republic (hereafter, Kyrgyzstan). We do this by drawing on a qualitative case study which explored the implementation of an internationally supported programme of methadone treatment, including as an intervention of HIV prevention, in three high security prisons.1 Our analysis uses this empirical case to investigate the practice-based dynamics of health intervention and knowledge translations. In contrast to an ‘evidence-based intervention’ (EBI) approach (Sackett et al, 2000), which predominates how implementation science is framed in the health field (Peters et al., 2013), we orientate around what can be described as an ‘evidence-*making* intervention’ (EMI) approach (Rhodes and Lancaster, 2019). Whereas evidence-based approaches seek to optimise the implementation of prior evidenced interventions of assumed universal effect potential as they travel into new and complex settings, an orientation to how interventions are evidence-made as entirely relational matters of their implementation practices unsettles assumptions of intervention immutability. Treating processes of intervening and evidencing as performative questions interventions and their effects as fixed and stable according to their prior evidencing, instead proposing these as relational and emergent, and thus, multiple and mutable.

**BACKGROUND**

Methadone treatment is considered by global health agencies as an “essential medicine” in combination intervention approaches to HIV prevention and opioid treatment for people who inject drugs (World Health Organization, 2015). Supported by systematic and meta-analytic reviews of evidenced harm reduction effects (McArthur et al., 2012), in combination with mathematical modelling of impact potential (Vickerman et al., 2014; Degenhardt et al., 2010), the introduction and scaling-up of methadone treatment as a technology of HIV prevention is promoted globally, including to lower and middle-income settings (World Health Organization, 2013; Larney et al., 2017). The region of Eastern Europe and Central Asia is presented by global health networks as in particular need of methadone treatment as HIV prevention (Mathers et al., 2010). The region is characterised as having explosive epidemics of HIV primarily attributable to drug injecting and linked to broader vulnerabilities precipitated by post-Soviet collapse (Atlani et al., 2000; Altice et al., 2016). Methadone treatment’s translation potential in the region is largely evidenced through estimates of health impact and cost effectiveness derived from locally adapted mathematical models (Vickerman et al., 2014; Alistar et al., 2011). Settings characterised by moderate to high levels of HIV prevalence are projected to require particularly high levels of HIV prevention and opioid treatment coverage to impact HIV epidemics (Vickerman et al., 2014). Here then, presents a complex problem of implementation when translating between evidenced technologies of modelled potentiality and situated accomplishments in actuality.

Kyrgyzstan is enacted by global health networks as affording particular promise as a site of methadone treatment for HIV prevention (Subata et al., 2016). Kyrgyzstan is one of only three countries in Eastern Europe and Central Asia offering methadone treatment in prison settings. Initiated in community settings as a pilot with international funding in 2002, the first prison-based methadone pilot intervention started in 2008. Methadone treatment now operates in six prisons and two pre-trial detention centres, engaging over 500 patients, relying exclusively on international funding as an initiative of HIV prevention (Subata et al., 2016). Kyrgyzstan thus potentiates a progressive translation towards the incorporation of globalised evidence-based intervention against the legacy of Soviet narcology emphasising criminalisation above public health.2 The expansion of methadone treatment in Kyrgyzstan, and into prison-based settings specifically, is framed by international agencies as a “success story”, especially given “the context of post-Soviet economic, social and political realities” (Subata et al., 2016). Yet, methadone treatment uptake is low, and prison-based methadone treatment remains highly unpopular. A nationally representative bio-behavioral prison survey in 2014 estimated that 7% of the prison population was enrolled in methadone treatment compared to the 33%, likely an under-estimate, who reported ever injecting drugs (Azbel et al., 2016).

**Methadone made in policy**

There is a history of resistance, including politically and at the level of national governments, to the incorporation of methadone treatment in some Eastern European and Central Asian countries, especially Russia (Latypov, 2011; Rhodes et al., 2010). Policies in Russia have constituted methadone a toxic drug of addiction, a cause of criminality, a failed treatment of the West, and as a resource for resisting international donor assistance (Rhodes et al., 2010). Here, methadone has become a site of translation in East-West relations as much as an evidence-based intervention in health. This accentuates methadone treatment as an object of the policies, discourses and practices which enact it. The methadone evidenced in Russian policy and other material-discursive practices emerges as a different methadone to that evidenced globally in HIV prevention policy and implementation science.

Russia arguably presents an extreme example in the enactment of a different methadone to that constituted in global health policies (Rhodes et al., 2010; Rhodes, 2018). We can highlight less extreme examples of the apparently singular object of methadone treatment being *made multiple* through its material enactments. For instance, the methadone produced in medical practices as a treatment or pain-relief is a different methadone, with distinct effects, from that produced in material-discursive practices of illicit use and addiction (Keane, 2013). Similarly, the methadone treatment of ‘post AIDS’ drug policies in parts of the West, such as the UK and US, is no longer framed by discourses of HIV emergency and harm reduction but by addiction recovery (Berridge, 2012), and this produces a different methadone potential, with different effects and expectations (Dennis et al., 2019). We can begin to appreciate methadone treatment as a *fluid intervention* of its shifting implementation relations (De Laet and Mol, 2000).

**Methadone made in practice**

Our work investigating methadone treatment implementations in Kenya illustrates the ‘fluid intervention’ potential of translations (Rhodes, 2018). Legitimised by HIV emergency, methadone treatment entered Kenya in December 2014 as an experimental policy solution to the problem of HIV linked to injection drug use (Rhodes et al., 2015). The performance of methadone treatment as an intervention of HIV prevention in Kenyan national policy chimes with its assembly in global health discourses of HIV concern (Degenhardt et al., 2010; Larney et al., 2017). Yet qualitative research investigating methadone’s implementations reveals that the methadones-in-practice are distinct from the methadone-in-policy. This work describes how local actor-networks – of methadone users, would-be users, clinicians, community workers, community and religious leaders – make-up methadone as an object of *addiction recovery*, and related to this, *hope of normalcy* (Rhodes, 2018). These actor-networks produce methadone treatment as a technical solution to personal and community ills related to problems of addiction. This ‘addiction recovery’ methadone coexists with other versions, including policy-mediated ‘HIV prevention’ methadone, and the methadone of the ‘drug-dens’ which is enacted as a harmful experiment of Western intervention. This work notices that methadone is a *virtual singular* held together as a *composite* which prevents it from falling apart despite its *multiplicity* in practice (Mol, 2002; Law, 2004).

Implementation science tends to treat intervention translations as technical problems (Rhodes and Lancaster, 2019). Working with methadone treatment as an immutable mobile, it conceives of its complexity in translation as primarily a *technical managerial problem* (Law and Singleton, 2005). For instance, methadone treatment’s implementation into East European and Central Asian settings tends to be constituted as a systemic problem of delivery systems and cultural understandings. Studies in Eastern Europe and Central Asia focus on how low rates of treatment engagement combine with high rates of attrition given certain context-based ‘barriers’ linked to programme quality and delivery, provider-patient relations, and ‘problematic’ patient or provider beliefs and expectations (Boltaev et al., 2013; Polonsky et al., 2015, 2016; Bojko et al., 2015; Mazhnaya et al., 2016; Subata et al., 2016). Here, implementation science can be treated itself as a set of material-discursive practices which seek to *bring into line* the multiple interpretations of methadone that co-exist with those of the evidence-based methadone performed by global health networks. In doing so, the possibilities for coming to know the different situated, relational and emergent versions of methadone that are made in practices are obscured.

**APPROACH**

In this paper, we reflect on how methadone treatment translates through its implementations in Kyrgyz prisons. At the outset, we do not treat methadone treatment as a stable object fixed by its prior evidencing in global health policy and HIV prevention science but as a performative matter of its practices of implementation (Rhodes, 2018; Rhodes and Lancaster, 2018). We seek to *reassemble* methadone treatment from a prior evidence-based ‘matter-of-fact’ to a local evidence-making ‘matter-of-concern’ (Latour, 1999, 2004). Latour’s naming of matters-of-fact as matters-of-concern draws attention to some of the limits of constructivist accounts in their re-framing of things according to alternative perspective without attending to their material performativity. Matters-of-concern accentuates things not as objective and pre-existing but as made-up in assemblages of social, material and political interest (Puig de la Bellacasa, 2017). Most importantly, it emphasises objects as lively, drawing attention to social and material effects as matters of becoming that are co-enacted through human and nonhuman entanglement. This offers a more distributed account of agency in which the human subject is not alone. Whereas matters-of-fact mistreats objects as separate to the social (as pre-existing and becoming objectively knowable through human centred science) matters-of-concern restages all things, nonhuman and human, as lively in their material becoming, thereby collapsing the binary bifurcations enacted by modern science which separate the natural from the social, the objective from the subjective, and facts from concerns (Latour, 2004). This alters how science is done for it troubles an approach which seeks to ‘bridge the gap’ between two worlds – nature and society, evidence and practice, reality and representation, knowing and doing – to accentuate the *materiality* of all things made in practices. Far from science and knowledge-making technologies being outside the practices they evidence, as if observing “from a bridge” (Puig de la Bellacasa, 2017: 33), they are entangled inside practices, at once enacting and being enacted by these. Indeed, the “letting go of the controlling power of causal and binary explanation comes with an immersion in the messy world of concerns” (Puig de la Bellacasa, 2017: 33).

We therefore approach interventions (whether health or other technologies, including knowledge interventions) not as fixed and immutable but as fluid and mutable, that is, evidence-made in practices (Rhodes and Lancaster, 2019). Whereas evidence-based intervention (EBI) approaches tend to hold on to an intervention and its effect as pre-existing its actualisation into new settings, potentiating universality, an evidence-making intervention (EMI) approach emphasises effects as emergent gatherings of relational association, thus potentiating multiplicity (Latour, 1999). In one, effect is located inside the *specific intervention object*; it constitutes the ‘substance’ of the intervention, it is something the intervention ‘has’. In the other, the effect is located inside the assemblage of *implementation events*; it is something to which an intervention becomes attached through its relations (Gomart and Hennion, 1998). Intervention effects are therefore *situated accomplishments* which do not proceed their enactment (Stengers, 2005). Approaching methadone as situated accomplishment is useful because it helps notice the ‘multiple methadones’ that become possible in practice, and the multiverse of effects that these might afford (Rhodes, 2018). This multiplicity of intervention and effect might otherwise go unnoticed or be closed off from view in an evidence-based approach which fails to treat things as matters-of-*concern*. This is a shift in emphasis from investigating how ‘interventions that work’ translate (an evidence-based approach) towards investigating how interventions are made and ‘made-to-work’ through their translations in practice (an evidence-making approach). Our approach therefore focuses on what interventions can be made to do, and how they are put-to-use, including beyond their intended aims of translation.

In the field of drug use and intervention, there is growing attention to appreciating drug effects as emergent and material matters of assemblages linked to implementation events rather than simply treated as matters of intervening substances themselves (Malins, 2004; Race, 2011; Dennis, 2016, 2017; Duff, 2013, 2014; Fraser et al., 2014). The seminal work here as it relates to methadone is Gomart’s analysis of how methadone effects in clinical trials are made-up multiply and differently (2000). The properties of methadone, the substance itself, is produced through the implementation practices of the trials. Rather than a singular methadone object ‘having’ an inherent or stable essence, which is then subject to variable interpretations according to context, there are multiple and altogether different methadone objects made possible. Gomart notices that the methadones performed by American and French clinical trials produce different effects, including in comparison to heroin (for which methadone is posited as a treatment). Whereas the effects of methadone in the American trial were held to be different to heroin, they were held as the same in the French trial. The “sheer multiplicity” of methadone makes it “impossible to hold that the substance is constant” (Gomart, 2000). Here then, we have ‘effects in search of a substance’, rather than a substance stabilised to produce a certain universality of effect. The implication for studying drug treatment translations is a shift from the substances in translation to the processes of implementation which *make-up* such substances (Barad, 2007). This is in keeping with the view that phenomena do not precede their enactments in practices, but rather emerge, are transformed, and are performed relationally through their ‘intra-actions’ (Barad, 2007). The notion of intra-action signifies “the mutual constitution of entangled agencies” meaning that a “lively new ontology” emerges (Barad, 2007: 33). Importantly, this emphasis on the materiality of implementation practices also helps attune research to the onto-political effects that intervention translations can generate (Mol, 2002; Law, 2004). Methadone and drug intervention effects, for instance, affect a particular kind of body, making-up a particular kind of subject, normalising a particular kind of conduct, in relation to a particular kind of problem, according to a particular implementation context (Malins, 2004; Fraser, 2006; Dennis, 2016; valentine, 2007; Harris, 2015; Keane, 2013; Nettleton et al., 2013; Bourgois, 2000). Taken together, we can ask what methadone treatment translations perform in the context of Kyrgyz prisons: What bodies and subjects do they make? What effects do they afford? How do they govern?

**CASE STUDY**

In keeping with the use of the case study in science and technology studies (STS) as a means through which to reflect, shape and perform critical analyses on the materiality of technology translations (Law, 2017), we draw on qualitative research led by Lyuba Azbel as part of a study supported by the U.S. National Institute of Drug Abuse (NIDA) investigating how prison environments in the post-Soviet space shape methadone treatment delivery.1 We use this empirical case to trace how health interventions translate through their implementations. Our analysis is framed within an approach (see above) which seeks to trouble mainstream assumptions of evidence-based intervention translation to notice how local matters-of-concern make methadone fluid and multiple with particular onto-political implications (Mol, 2002).

The impetus for the qualitative study upon which we draw here for our case was a large implementation science study designed to inform the delivery of methadone treatment into Kyrgyz prisons. Survey research has indicated moderate to high levels of HIV (10%) and hepatitis C (50%) among prisoners, and significant proportions (35%) of prisoners with a history of injecting drugs (of whom 85% inject drugs while in prison), yet only a minority (11%) of these engaged in methadone treatment (Azbel et al., 2018). In response, an implementation science project sought to trial a motivational intervention to encourage methadone treatment uptake, and a parallel qualitative study sought to investigate prisoner engagements with methadone treatment.1 The problem, however, was that the motivational intervention did not appear to work as intended, with not a single person participating in the intervention linking themselves into the methadone treatment available. Rather than take an approach to implementations research which a priori locates the implementation problem as a matter for technical or managerial solution, linked to adapting the intervention or its delivery context, we use qualitative data to investigate more fundamentally how the object of intervention in question (methadone) is made to be in its particular situation (Law and Singleton, 2005; Rhodes and Lancaster, 2019).

The empirical data comprises qualitative interview accounts with men in prison with a history of injecting drug use who were recruited from three high security prisons in Bishkek. These prisons were selected by the team driving the implementation science project because they represented higher proportions of prisoners who injected drugs and a higher likelihood of participation in methadone treatment.3 Interviews were undertaken, with written consent, before (n=22) and after (n=20) release from prison, between October 2016 and September 2018.4 Participants were recruited in close collaboration with local non-government organisations acting in partnership with the prisons. In addition to prisoners, 21 interviews were carried out with key actors in the field of prisoner health, including: representatives of the national prison administration (3); staff of linked non-government organisations (5); peer workers with people who inject drugs (2); informal prisoner leaders (4)5 and prison medical (4) and non-medical staff (4). XX observed sites of methadone treatment distribution, the prison space, and interactions among key participating actors. Access to prisons for observational and interview work was enabled through a single day pass by application months in advance. While the qualitative interview data has been coded according to principles of constructivist grounded theory (Charmaz, 2006), the analysis here works to incorporate ideas from STS regarding the multiplicity, fluidity and mutability of objects-in-practice (Mol, 2002; Law, 2004; Puig de la Bellacasa, 2017; Latour, 2004) to ‘make a case’ (Law, 2017).

We do not have the space here for detailed reflection, but wish to make three observations regarding the ethics-in-practice of this research. The first concerns decisions regarding the spatial location of interviews. The prison sites were physically divided between the ‘red zone’ which housed the formal administration (from which methadone was distributed, see below) and the ‘black zone’, or *zhilaia zona* (living zone), which housed the prisoner community (from which heron was distributed, see below). These zones and their demarcations acted as material in the governing and making-up of people and substances in relation to agency and effect. The physical site of the interview location thus took on considerable significance in relation to its association with either the Reds or the Blacks, and thus a site equidistant between the red and black zones was selected. Second, the researchers placed considerable emphasis on assuring participants that the research was not linked to the prison authorities in any way, yet the qualitative research may have been associated by some with outside and prison authority supported efforts to implement methadone treatment within the prison. Third, assurances of confidentiality were not without complication. While all data generated and audio recorded were treated in strict confidence, according to ethics approvals,4 word about the study and its general topic (methadone) quickly travelled throughout the prisons. This produced a chain referral of interested participants, but not without others’ potentially knowing of their participation. In the very early days of the study, the only means of reaching prisoners, given that the prison colonies are very large open spaces,3 was by loudspeaker announcement (a routine means of calling prisoners to attention) with a request to report to the building designated for the research.

We shape our case study below in relation to two forms of translation relating to methadone: substance-making; and governing through substance.

**SUBSTANCE-MAKING**

First, we notice that methadone is enacted in prisoner society as a ‘bad’ (Extracts 1-3). This object is not health-producing but harm-producing. Methadone is toxic. In multiple ways, methadone messes with the health of the body. Users of this substance complain of sores, blisters, bad teeth, bad lungs, bad livers, an addiction worse than heroin, and unparalleled drug withdrawal. We are told, for instance, that methadone users “degenerate right before your eyes”. This degeneration is described as a loss of the body to methadone (Extract 2). Here, methadone is described as “taking over” the body. Users of methadone talk of it “seeping through the body”, to the point that the body is filled-up, made-up, of methadone. The healthy body *becomes* *methadone-body*. As was often remarked by longer-term users, unable to look back or quit their methadone entrapment: “My bones are now made of methadone”. The substance of the human alters through its incorporations with methadone (Extract 3). It is telling that those who felt themselves to be healthy *avoided methadone*. Methadone is enacted as the preserve of the ill, and the becoming-methadone-body an object of dis-ease.

Second, we notice that methadone effects merge with those of diphenhydramine, locally branded and sold as Dimedrol®;6 antihistamine pills which are available illicitly, which are crushed and then injected in an attempt to turn methadone into a high (Extract 4-5). This affects, substantively, what methadone becomes. Whereas methadone-in-policy is pure, untainted and bounded, in light of its entanglements with Dimedrol, the methadone-in-practice is open and porous, and consequently, much messier. Methadone and Dimedrol are used together (Extract 6). They become inseparable as a pattern of how ‘drugs’ in these prisons are used. These substances become one, a fluid intervention of a new kind. The effects afforded by methadone become indistinguishable from those of Dimedrol, a substance performed as particularly messy in the bodily damage it causes (Extract 6). The becoming-methadone body shifts, in time, to a *less-than-human* body (Extract 3). The methadone-Dimedrol subject is variously Othered as a zombie, a monster, an animal, as rotting, as garbage, as crazy, as beyond knowability or rationality (Extract 7). Accordingly, and significantly, methadone treatment is constituted a loss of human agency, a slow death, and for some, a sure death (Extract 8). It is little wonder that there is such low uptake within Kyrgyz prisoner society for this particular methadone.

Taking these observations together, the methadone-in-practice of Kyrgyz prisoner society is dramatically different to the methadone enacted through the practices of internationally supported HIV prevention and drug treatment programmes. The methadone-in-practice is not the same as the imagined immutable mobile in translation. Those working to translate methadone as a mobile technology of HIV prevention express shock at just how different the methadone-in-practice appears to be (Extract 9). This is not a simple ‘composite’ methadone or a ‘virtual singularity’ of methadone (Mol, 2002). And neither are these object translations fluid or smooth adaptations. Rather, the singular object ‘methadone’ starts to rupture and fall apart. Methadone becomes combustible. Its translations are unpredictable, oppositional, and *fiery* (Law and Singleton, 2005). Both the methadone object, and its imagined subjects, are *ontologically ruptured* through their implementations as *different things*. This is why the subjects of methadone made on the Inside (in prisons, in practices) are said by those on the Outside seeking to implement methadone treatment to defy rationality; for they are enacted as *beyond knowing*, as entirely Other things (Extracts 7 and 9). Methadone has become matter *known otherwise*.

Let us consider some of the actors in the assemblage of the becoming-methadone body. We have noted how the nonhuman actors of methadone and Dimedrol at once incorporate one another as well as the human bodies they associate with. Another actor in this assemblage is heroin.7 This is glimpsed by the shock expressed by one of the promoters of the prison methadone programme who notes how heroin is enacted as a relative ‘good’ in contrast to methadone enacted as a ‘bad’; the polar opposite of how these apparent same substances are materialised on the Outside in evidence-based health intervention (Extract 9).8 We notice that methadone’s knowing is *relational*, not only to Dimedrol but also to heroin. Methadone is held as a relative harm to heroin: it is more dependence-inducing; it has worse withdrawals; and it is more health damaging (Extract 1). Crucially, methadone does not afford the euphoric-inducing effects enacted by heroin (Extract 10). Whereas heroin potentiates a high, methadone potentiates a low. Whereas methadone enacts docility and passivity, heroin enacts vitality and energy (Extract 11). Methadone constitutes loss, of the body, of the high. And this may go some way towards understanding the agency of Dimedrol in the assemblage; for Dimedrol is enacted as a device for affording methadone the high it does not produce (Extract 4-5). Dimedrol is used with methadone because it is said to generate a high reminiscent to that of heroin (Extract 5). Dimedrol constitutes methadone as a *drug* rather than as a medicine or treatment. It potentiates methadone with a ‘*drug life’*. We notice then, that the becoming-methadone-body of methadone treatment emerges immanently from matters of drug assemblage in which methadone, Dimedrol and heroin entangle. Furthermore, we notice that these associations make-up methadone as a drug but that this drug-in-practice is a poor drug, which is lacking in potential and failing in effect in so many ways, including how it falls short of heroin’s potentiality.

**GOVERNING THROUGH SUBSTANCE**

It is important to note that the assemblages making-up the becoming-methadone-body do not merely comprise psychoactive substances interacting with human bodies but other actants as well. Noticing these helps attune our analysis to the situated practices of Kyrgyz prisons. We draw specific attention here to practices of everyday informal prison governance which are afforded through the device of “The Understandings”, an unwritten law or code of the criminal and prison community (Azbel et al., 2019), which enact methadone (and heroin) in particular ways.9 We are observing that methadone is afforded agency as material inside the day-to-day practices which make-up, and thus govern, prisoner social relations. The methadone-becoming-body is at once material and social. The becoming of *methadone* in prison is the making of prisoner *society*: how methadone is put-to-use, how it is *made-to-matter*, is an effect of the practices which generate the sense of social and societal relations.

With State capacity limited, law enforcement inefficient, and corruption pervasive, the Krygyz prison is a stronghold of organized crime, a legacy of the Gulag, where prisoners themselves prescribe punishments, police hierarchical boundaries, disseminate rules, and function as guarantors of justice (Azbel et al., 2019; Kupatadze, 2014; Cheloukhine, 2008). This informal governance, institutionalised through criminal organization, enacts a disciplinary power in relation (and opposition) to those of the prison administration and State (Kupatadze, 2014). Methadone treatment becomes an object of translation between the diametrically opposing rationalities of governance of the State, “the Reds”, and the informal Criminal Code, “the Blacks” (Azbel et al., 2019). While there are exceptions, the day-to-day practices of the Criminal Code7 constitute signing-up to State- administered methadone treatment a problem of conduct. The methadone subject is enacted in prisoner society as lacking decency and agentic control, and as untrusted to work in the service of the Criminal Code, given associations of methadone with State supported intervention (Extract 12). Methadone’s power-of-acting extends beyond human centred psycho-activity into matters of translation between political disputes, normative values, and societies. These are some of the *onto-political* effects of methadone’s making (Mol, 2002; Bacchi and Goodwin, 2016).

Reassembling methadone treatment as a matter-of-concern, as a thing made-to-matter locally, helps notice how apparent matters-of-fact have specific contexts and politics (Latour, 1999; Stengers, 2005). The methadone in translation from the Outside has disruptive potential in relation to vital matters-of-concern on the Inside. As elaborated more fully elsewhere (Azbel et al., 2019), a core governing practice of the Criminal Code is the ‘Obshchak’.The Obshchak are those in the informal prisoner hierarchy or ‘caste’ system7 who govern the prison and manage a common fund of goods also known as the Obshchak. Prisoners (excluding the lower caste) determine how goods from the Obshchak are distributed amongst themselves according to need, work, and social status within the prisoner hierarchy, the latter determined by a lifetime of actions in relation to the Criminal Code. Specially assigned members of the Obshchak distribute the Razgon to the Poriadochnye – “the Decent Ones” – the second to highest class of prisoners in the hierarchy. The Poriadochnye are under the overall direction of the Polozhenets, the informal leader of the prison, who is under the direction of the highest criminal authority of the country, the Thief-In-Law. Those undertaking surveillance in all aspects and areas of prison life – from drug use to the canteen – are known as the Smotriashchie, and these report to the Polozhenets. While the Obshchak can distribute cigarettes or tea or other goods as part of its common fund, its primary exchange and capital is heroin. Heroin is distributed every 10 days to all prisoners, at no cost, and daily to those doing specific work for the Obshchak.

Methadone treatment is thus material inside a network in which heroin is also a key actor. This accentuates how heroin is valorised, relative to methadone, as a substance of multiple effect potential, with different capitals flowing through the bodies of the individual and society. Heroin affords a high of different kinds; from internalised embodied psycho-active effects to socially embodied positions of power and agency. The introduction of free methadone administered by the State threatens such vital matters-of-concern. Prisoners on the Inside who are incorporated into the Outside project of methadone treatment *cross boundaries*. We not only find that those on the Outside enact the methadone-in-prison as Other to that imagined or intended; as unknowable and even monstrous in its contaminations with Dimedrol (Extracts 7 and 9), but at the same time those on the Inside ‘other’ the subjects of methadone, not only as monstrous but more particularly as *useless*, *unvirtuous* and *untrustworthy* (Extract 12). The othering of methadone on the Inside is specific in how it performs a governable subject, enacting the methadone user as a thing that constitutes *mess* which does not *work* in its society (Law, 2005). The methadone user is at *risk* and of no *use* (Extracts 12-13). The methadone user cannot necessarily be trusted to work to uphold the Criminal Code. More than this, the methadone user fraternises with the State authorities, and must be held in suspicion, and even considered a traitor (Extract 13). We are noticing how methadone has governing *agency* on the Inside in how it is used as matter to confer citizenship and inclusion. For instance, those ‘signing-up’ to methadone treatment are excluded access to heroin via the Razgon (Extract 14). With heroin afforded high value – personally, materially, socially, politically – this is a technology of governance that *really matters*. Moreover, those taking-up methadone are more likely to be those who had been *outcast* into the lower classes of the prisoner hierarchy, known as the Obizhennye, with nothing left to lose (Extract 15). They become *nothing*; at once less-than-human in their embodiment (see above) and less-than-useless in their societal contribution (Extract 16).

Taken together, the methadone treatment imagined as evidence-based health intervention, and administered by the State, does not belong *here*. In their various associations, the actor-networks which make-up methadone treatment on the Outside *and* Inside enact this particular methadone as Other. The methadone-in-practice of prisoner society *neither* translates as the HIV prevention and opioid dependency treatment envisaged by its implementers *nor* is it in concert with the informal governing practices of prisoner society in relation to those of the State. This methadone does not *work* in its situation, and neither is it *owned* or *desired*. And this is why the subject of methadone is cast in these actor-networks as variably unknowable, useless and unfit. Indeed, methadone is a “*slow death*”, at once of the individual and social body. This methadone treatment is an entangled mess, in its multiple materialisations.

**METHADONE ONTOPOLITICS**

What conclusions can we draw from this case? We have used qualitative data to make a case to reflect on the substance of health intervention translations as matters of their implementation practices. We have argued for an approach which treats evidencing as performative to accentuate how intervention objects are always matters of becoming inseparable from their knowledge-making productions. This has important implications for how we think regarding evidence-based interventions and their translations. First, and in contrast to mainstream public health implementation science, we question assumptions that interventions can be constituted as relatively stable entities which exist outside their evidencing events. Second, this leads us to question assumptions that interventions can be translated between settings and situations whilst holding their shape, fidelity and universal effect potential. We come to this conclusion through our *reassembling* of methadone treatment as a prior matter-of-fact to a local matter-of-concern (Latour, 1999, 2004).

Specifically, we have noticed the multiple methadone treatment interventions made possible in practice in Kyrgyz prisons and what these affordances *do* in these contexts. This has enabled us to see the object of methadone treatment not as a stable substance which hosts certain essentialised effects, but as a fluid and fiery object which is put-to-use and made-to-matter to substantiate a multiverse of effects (Law and Singleton, 2005). Our case study illustrates how *substances are made* *relationally in their practices* (Mol, 2002; Gomart, 2000). Most importantly, treating methadone implementation as an evidence-making event (Michael and Rosengarten, 2013), accentuates how object translations enact an *ontological politics* (Mol, 1999, 2002; Puig de la Bellacasa, 2017). Stengers argues that reassembling matters-of-fact as matters-of-concerns “insists that we think, hesitate, imagine and take sides” (2018: 3). She writes: “The essential thing with ‘matters-of-concern’ is to get rid of the idea that there is a single ‘right answer’ and instead put what are often difficult choices on the table, necessitating a process of hesitation, concentration and attentive scrutiny” (2018: 3-4). In its different translations, in it’s becoming altogether different things in relation to individual and social and political bodies, the methadone object is afforded agency to govern materially in different ways. Within the contextual limits of our case study, we have noticed how *methadone enacts society*; one that is *relationally emergent* and *otherwise*. The methadone of evidence-based global health translates, and changes shape, as an effect of the governing practices of prisoner society in relation to those of the State. Methadone and other drug interventions are at once onto-political interventions, with embodied effects that flow way beyond the mere psycho-activity of substances incorporating individual bodies to material highs and lows which incorporate the practices of social networks and societies.

**EVIDENCING-MAKING IMPLEMENTATION SCIENCE**

This analysis also has some implications for how we think-with intervention effects and implementation science. We have shaped our case to do more than illustrate that evidence-based health interventions need not translate smoothly. As we move from methadone treatment as a presumed singularity and immutable mobile to an enacted multiple and mutable mobile in practice, we also alter how we imagine implementation science. We entertain implementation science as something other than a mere technical service intervention in an evidence-based intervention approach. Indeed, in an evidence-*making* intervention approach, we move towards what might be described as a more speculative implementation science attuned to noticing and exploring what might be otherwise (Stengers, 2018; Rhodes and Lancaster, 2019).

The implementation science we are advocating questions interventions and their effects as fixed and stable, instead proposing them as relational and emergent, and thus also, multiple rather than singular (Mol, 2002). It challenges presumptions of separation between the physical and social, nature and culture, and evidence and practice, which dominate mainstream evidence-based health intervention paradigms, instead proposing these as entangled in material practices (Latour, 1999, 2004; Puig de la Bellacasa, 2017). And it expands notions of agency beyond those of human actors to include the effects of non-human actors (such as drugs, diagnostic tools, clinical guidelines, intervention devices, codes of practice, and laws) (Callon, 1984; Latour, 2005). This focus on materiality orientates towards a ‘flat ontology’ (Law, 2004). It is a way of thinking about health intervention that does not privilege human objects, or their sciences, as either the primary agentic force or primary access to knowing. It places all objects, human and otherwise, on equal ontological footing.

Interventions are thus treated as “objects-in-practice” (Mol, 2002), with immanent effects which emerge from entanglements inside assemblages or actor-networks (Delanda, 2006; Latour, 2005). This is what we have noticed with the coming together of different actors in the becoming-methadone-body of Kyrgyz prisons. The becoming-methadone-body is an ‘intra-action’ of the different substances and bodies in an event and how these both encounter and incorporate one other (Barad, 2007). The lesson here is that by investigating emerging patterns of intra-action it also becomes possible to grasp something of the networks and apparatus that make these up (Hollin et al., 2017; Barad, 2007; Fraser, 2006). Through our analysis, we have accordingly moved between the noticing of patterned intra-actions of methadone effect and the apparatus which at once makes and is made-up from these, here called prisoner society, in which The Understandings9 emerge with the Obshchak and other nonhuman actors and substances including methadone, heroin and Dimedrol. An evidence-making approach might be described as a speculative implementation science because it is attuned towards noticing *emergent effects* in implementation *events* rather than delineating causative points and pathways between specific health interventions and outcomes (Rhodes and Lancaster, 2019; Savranksy et al, 2017; Race, 2004). We speculate beyond effects presumed to flow from, or be contained by, a specific drug or intervention to the emergent (and unpredictable, even fiery) effects that *intervening* makes. And this, as we have argued in the case of methadone’s making in Kyrgyz prisons, brings us closer to appreciating the onto-political effects of interventions as governing practices (Duff, 2015; Bacchi and Goodwin, 2016; Fraser et al., 2014). As Mol reminds us: “If each therapeutic intervention achieves something different, what counts as improvement may similarly tend to become less obvious. The question ‘is this intervention effective’ then dissolves into another question: ‘what effects does it have?’” (Mol, 2002: 183). Noticing methadone treatment as an ontological politics is inviting various speculations, not only regarding the effects that methadone intervening makes, or might do, socially, politically and otherwise, but also regarding the apparatus and effects of implementation science in its evidence-making of health intervening.

With both methadone and implementation science in mind, this moves us to reflect ‘what is made-to-matter?’, and ultimately, what ‘effects do we want?’. Our case study of Kyrgyz prisons accentuates how methadone is made-to-matter in relation to heroin, among other actors, inside the local governing practices making-up prisoner society. In noticing the different methadones made possible in Kyrgyz prisons, we can speculate on how methadone is made otherwise, as well as on the kinds of methadones (as well as heroins and other drugs and interventions) that might be made possible. But it is important to note that an evidence-making approach to implementation science does not force or narrow a simple choice. This would be akin to “the promise of closure through fact-finding” which is common in evidence-based intervention approaches (Mol, 2002: 177). Rather, noticing how things might be otherwise attends to the politics of evidencing and intervening as matters-of-concern. This is a move from seeking closure on what works under what conditions (evidence-based implementation science as we know it) to inviting dialogue about what might be done in light of how intervening is made to matter (an evidence-making implementation science).

Our case proposes that the effects afforded locally in prisoner society in relation to methadone, as well as heroin and Dimedrol, are contingent in their mattering, and productive of a variety of fluidly situated goods, bads, harms and benefits. Noticing how the methadone that is enacted in practice in Kyrgyz prisons can be made damaging, to individual bodies as well as to embodied societies, prompts speculation as to how methadone intervening might be done differently. At the same time, we can speculate on the fluid effects of other substances acting in the assemblage which makes-up methadone’s effects and how these might be worked-with to intervene differently. We notice, for instance, that the heroin enacted in practice afforded multiple forms of high and capital as well as treatment potential. Global evidence-based intervention efforts translating HIV prevention and opioid treatment into Kyrgyz prisons tend to work with methadone and heroin singulars. We are finding that an evidence-making implementation science notices methadone and heroin as multiples and potentials, and this prompts speculation on how intervening with methadone and heroin might be otherwise.

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**ENDNOTES**

1. The qualitative research on which we draw as a case study for this analysis was led by Lyuba Azbel as part of a U.S. National Institute of Drug Abuse funded study investigating how prison environments shape the delivery of internationally supported methadone treatment interventions in Kyrgyz prisons (Grant number: R21 DA042702). This implementation of fieldwork for this study was led by Lyuba Azbel, with Tim Rhodes and Jaimie Meyer contributing as a co-investigators. The methadone treatment programmes in Kyrgyzstan are funded by the Global Fund to Fight HIV/AIDS, Tuberculosis and Malaria, with methadone treatment provision written into federal law, and administered in prison by State authorities. The National Institutes of Health supported implementations research linked to interventions designed to facilitate the uptake of methadone treatment in Kyrgyz prisons, led by Dr Frederick Altice (Grant number: R01 DA29960).
2. Narcology is a subdivision of Soviet criminal psychiatry with close links to state law enforcement which conceives of treatment from addiction in terms of abstinence (Babyan, 1985; Latypov, 2011). The tradition of narcology is closely linked with the Serbsky Central Research Institute of Social and Forensic Psychiatry, once infamous for using psychiatric medicines for state ordered “treatment” of Soviet dissidents.
3. These prisons are known locally as “colonies”. They are large open camps surrounded by a wall, with a physical divide between the administrative authorities and prisoner community. As noted in Lyuba Azbel’s fieldnotes of one of the prisons: “The *zhilaiia zona* (living zone for prisoners) is a 16 hectare space housing all prisoners, a pig sty, and a decrepit Soviet factory”. Unlike prisons of the West, these colonies do not contain cells and prisoners have freedom of movement within the *zhilaiia zona*, and this architecture contributes to the collective informal governing practices of post-Soviet prisons (Piacentini and Slade, 2015).
4. The empirical work was undertaken with ethics approval from Yale Human Investigations Committee (IRB), including a prisoner representative, and from the Department of Health and Human Services, Office for Human Research Protections (OHRP). Ethics approval was also granted from the Committee on Bioethics under the Global Research Institute in Kyrgyz Republic.
5. The *blatnye* are prisoners at the upper echelons of the informal prisoner hierarchy, who generally do not inject drugs, and thus were recruited among the stakeholder actors. See the main body of our case study for a description of the informal and self-governing practices of the prisons (see also Azbel et al., 2019).
6. Diphenhydramine is an ethanolamine derivative and H1 histamine antagonist that is sold under the brand Dimedrol® in Kyrgyzstan. Though it has an opioid sparing effect, Dimedrol readily crosses the blood brain barrier into the central nervous system, resulting in predominantly sedative and antiemetic effects. Antihistamines may have a synergistic affect with opioids. There is a theoretical affinity of Dimedrol for the dopamine receptor and potential to increase dopamine release, where its use may potentiate euphoria when used in conjunction with opioids or opioid agonists.
7. Our analysis here notices heroin as a key actor in the assemblage which makes-up methadone effects. Given our primary focus here on methadone treatment translations, it is important to note that we do not consider in detail the multiple and fluid enactments of heroin use and intervention, which will be the focus of future analyses.
8. We work here with the ‘inside’ and ‘outside’ as enacted objects-in-practice, including following Law’s use of the ‘in here’ and ‘out there’ as a device for noticing how knowledges travel (Law, 2004). In our use here, the Inside refers to methadone treatment enactments inside prison and as an effect of prisoner society, and the Outside refers to methadone treatment as enacted in evidence-based and global health intervention practices. Our use of the Outside therefore does not refer to the local enactments of methadone treatment in other community and medical settings or actor-networks beyond prison in Kyrgyzstan.
9. For a fuller description of informal governing practices within Kygyz prisons and their geneaology, see Azbel et al., 2019. For example, ‘The Understandings’ is an unwritten set of edicts which structure all aspects of prisoner life, including what kinds of interactions to avoid as well as standards of good conduct and prisoner society citizenship. The hierarchical layers of prisoner society are referred to as *masti*, which literally translates to ‘suites’ as in a pack of cards.

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