State Changes: Prototypical Governance Figured and Prefigured

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Abstract
My 2019 article ‘From Planning to Prototypes: New Ways of Seeing Like a State’ (P2P) drew attention to some shortcomings of the kinds of critical, reformist impulses fostered in law and development work. I sought to show that persistent preoccupations with the destructive hubris of ‘top-down’ planning—especially state planning—bypassed the tendency for great power to be deployed in other stylistic modes: through the release and responsive tweaking of prototypes, for instance. This article engages with later developments—at one of P2P’s main field sites and scholarly literature in dialogue with P2P—to build upon the analysis therein. It elaborates on the kinds of power animated through prototyping, showing how prototyping is often combined with other governance styles and what it makes of the inputs on which law has typically been said to draw and of law’s claims to autonomy. It complicates the provenance of this style by reference to mid-to-late-twentieth century UN sanctions regimes, highlighting that governance prototyping is as much state-made as business-led and not restricted to the development field. With particular attention to the strangeness of the human user presupposed by prototyping, this article also aims to identify some modes of critical engagement to which this governance style might be answerable.

Keywords Governance · Planning · Prototypes · Critique · International Law

Introduction

The aim of my 2019 article ‘From Planning to Prototypes: New Ways of Seeing Like a State’ (hereafter P2P) was to draw attention to some shortcomings of the kinds of critical, reformist impulses that James C. Scott’s 1998 book Seeing*
Like a State had helped to foster in law and development work (Johns 2019a). P2P sought to show that preoccupations with the destructive hubris of ‘top-down’ planning—especially state planning—bypassed the tendency for great power to be deployed in other modes: through release and tweaking of prototypes, for instance. Taking burgeoning recourse to digital technologies in international humanitarian and national development work in Indonesia as illustrative, P2P highlighted the extent to which global governance practices among states and international organisations have metabolised critiques frequently levelled at them, without any associated disturbance of legacy power. In other words, P2P suggested that such criticism has done little if anything to prompt any anti-hierarchical redistribution of power. States and international organisations had become quite adept at marshalling, mobilising and navigating distributed power, P2P argued, while many of their critics were still preoccupied with usurping their centralised power—critical efforts that tended to mimic the very logic that they purported to confront.

This article revisits and builds upon the arguments in P2P through a redoubled focus on the distinctiveness of international governance styles effected prototypically and their relationship to other prevailing governance techniques. Its main aim is to reflect on the modes of critical engagement by which this governance style might best be addressed. This aim is pursued through attention to the work of a range of scholars who have undertaken comparable or related analyses in the years since P2P was published, prior to this special issue. After that, the article presents a very brief ‘prehistory’ of this style of governance amid late twentieth century UN sanctions regimes, noteworthy for their continual tweaking and resilience in the face of criticism. The purpose of the latter is not to tell a decisive origin story, but rather to explain why certain modes of critical engagement with this governance style—those which focus on recent decades’ philanthro-capitalism on the part of major technology companies, for instance—may misread or misattribute the governance-by-prototype style on which P2P focused. This article argues that governance-by-prototype is one among several ways in which authority is mobilised internationally through embrace of contingency and through collapse of law and policy into their sensory inputs: practices cultivated as much by states and international organisations as for-profit corporations. Meanwhile, many legal scholarly critiques levelled at prevailing governance architectures have remained preoccupied with countering fixity, closure or ‘top-downism’ (Johns 2021b). Some have sought to counter governance-via-contingency by reopening an imaginative distance between its operations and effects (Rouvroy 2013). This article argues against fixation on reflective or deliberative openings, built around language. Instead, it argues for tackling this governance style on its own user-responsive terms (that is, in terms not aimed at altering users’ reasoning so much as leveraging intended and unintended prototype use). Critique so oriented is not offered as an antidote to a receding naturalism, but rather aims at enlivening a politics of prototype use and ‘misuse’.

More specifically, the article proceeds as follows. First, it introduces the phenomenon of governance-by-prototype as a prevailing governance style, proceeding in dialogue with some relevant scholarship published prior to this special issue. For reasons
outlined in P2P, this article employs the language of ‘governance style’ to capture authority-wielding practices beyond the explicit formulation or enforcement of law and policy and encompassing standards, protocols, metrics, programming and infrastructures. This involves some elision; no attempt is made here to parse out ‘law’ from ‘policy’ or ‘governance’, side-stepping distinctions in which some public international lawyers are elsewhere heavily invested (e.g., Koskenniemi 2006). Interviews referenced in this article are selections from a series of around 46 semi-structured interviews or written question-and-answer exchanges with 38 distinct interviewees affiliated with 18 different organisations, governments or firms conducted between 2015 and 2021 focused on people engaged, in various capacities, in efforts to deploy digital data and technology for governance.

Governance-by-prototype is a style that the article argues was prefigured in international sanctions regimes introduced since the mid-twentieth century: a claim that links contemporary prototyping to the rationalities and anxieties of the Cold War. As noted above, that is not to unearth prototyping’s original provenance so much as to delink it from ‘platformisation’ and indicate the multiplicity of its underwriters.

Next, the article revisits the locale that was in P2P treated as emblematic of the ‘politics of prototypical technique’ burgeoning on the global plane (Johns 2019a, p. 863): Pulse Lab Jakarta (hereafter PLJ or the Lab), a part of the UN Global Pulse initiative. PLJ’s work continues to exhibit tendencies on which P2P remarked, namely: a preference for ‘generat[ing] testable policy mock-ups informed by provis- sional hypotheses, and […] seek[ing] rapid user evaluation of these mock-ups’ with an eye to their ‘technical optimization’ validated by use (Johns 2019a, p. 851; 853). Nevertheless, this article notes shifts in PLJ’s practice and priorities since the con- duct of the research underpinning P2P, and takes account of subsequent scholarship, to refine the empirical claims made in P2P.

Finally, the article offers brief reflections on what these state changes in governance style make of the figure of the ‘human’ in the name of whose care they are advanced: a figure whose very strangeness could be a leverage- or entry-point for non-optimising use of prototypes as a potentially generative form of internal criti- tique. The argument, overall, is that the prevalence and power of governance-by-pro- totype warrants collective forging of a critical repertoire that is attuned to it: work shown to be well underway in this special issue.

**Prototypical Governance**

The governance-by-prototype style sketched in P2P is characterised by ‘an open- ended, opportunistic, now-oriented disposition’ focused on ‘possibilities being worked up iteratively and inductively from the inferences that may be drawn from the data available, as limited and partial as those data may be’ (Johns 2019a, p. 850; 853). Governance carried out in this mode may be distinguished, P2P argued, from new governance experimentalism and neoliberal self-governance. In contrast to the former, it aims to engender repetitive use rather than reasoned persuasion through information-sharing. In contrast to the latter, it favours endless, collaborative...
tinkering rather than aspirational self-government. At P2P’s end there remained, nevertheless, much room for elaboration of the peculiarities of this governance style.

Marion Fourcade and Jeffrey Gordon have probed these peculiarities in their study of ‘statecraft in the digital age’ or the emergence of the ‘dataist state’ (Fourcade and Gordon 2020). Echoing some aspects of P2P, Fourcade and Gordon highlighted how the influx of machine learning into state operations tends to invert the traditional sequence of state planning functions. ‘Rather than planning a city sized for a certain population, certain traffic, and certain activities’, Fourcade and Gordon wrote, ‘[dataist state] planning follows after urban life commences. Public amenities must be fluid and responsive’ (2020, p. 85). This recalls the discussion, in P2P, of efforts to make available to government officials ‘live dashboard[s]’ fed by public and private data analysed using machine learning algorithms to indicate when, where and in what order their attention should be directed and governance powers potentially exercised (Johns 2019a, p. 848; see also Johns and Compton 2019).

Envisioning state officials exercising legal authority in the foregoing way has implications for the theorisation of law. It potentially makes trouble for Scott Shapiro’s (2011) planning theory of law, for instance, and for those who have called for ‘deliberative forward-planning’ on the international plane (Kingsbury 2019). It is difficult to conceive of the exercise of legal authority as social planning activity (or activity involving interpretation of shared plans) aimed at remedying moral deficiencies in the circumstances of legality, as Shapiro has argued that we should, if the determination of those circumstances is partially automated and if, as a consequence, the rationales for any particular exercise of legal authority might only be reconstructed after the fact, if at all (cf. Van Den Meerssche 2022). The prevalence of prototyping highlights how much governance entails the opportunistic marshalling of available data and resources, and associated struggles for attention and funding, rather than the propagation and reasoned pursuit of shared plans.

Fourcade and Gordon did not, however, dwell on the kinds of questions with which positivist legal theorists such as Shapiro are concerned, nor focus on the governance techniques characteristic of this style of ‘statecraft’. Digitalisation might demand the ‘creat[ion] [of] new principles’ of law, the introduction of new criteria for legal entitlement and recourse to new methods of law enforcement, they speculated (Fourcade and Gordon 2020, p. 84; 87; 91). Yet it was not, in Fourcade and Gordon’s account, remaking law or legal authority. Legal authority exercised via machine learning technologies was, in their telling, just one among many ‘constructs’ through which the ‘dataist state’ sought to ‘operationali[se] [its] goals’ (Fourcade and Gordon 2020, p. 86). Their concern was what this operationalisation might make of the state, not what it might make of the law. In this respect, Fourcade and Gordon’s outlook aligns with that of some legal scholars, such as Aziz Huq and Mariano-Florentino Cuéllar (2021), who have worried about enhanced powers of the ‘machine-learning state’ being instrumentalised through law and proposed ways in which publicly minded legislators might reform law to condition those powers. In each case, continuity between state power and law is presumed. On one hand, law is presumed to reliably serve the aims of the dataist state (service assumed in spite of legal theorists having shown that law is often an unreliable vector of power: e.g., Kennedy 1997, pp. 286–88). On the other hand, law is treated as an expression of
public reason or formal consensus (content assumed without regard to legal theorists having shown that law is typically charged with conflicting commitments: e.g., Kennedy 1997, p. 83; 95; 219). In each case, also, the character of law so framed is assumed to have been unchanged by digital mediation and the turn to prototyping.

In contrast, Liam McHugh-Russell, Deval Desai, Andrew Lang, Dimitri Van Den Meerssche and Geoff Gordon, alongside others, have sought, in their respective and combined work, to tease out what states and international organisations predisposed towards prototyping tend to make of law, governance and regulation, beyond the latter’s instrumentalisation to seemingly new ends or refilling with new reformist ambitions. This work has done a great deal to further develop and connect ideas put forward in P2P—and much besides.

In McHugh-Russell’s (2019) analysis, contemporary recourse to ‘data and statistical’ science in the work of international governance is propagating ‘governance by knowledge’ alongside traditional international law’s ‘governance by norm’. Taking the World Bank’s Doing Business project as exemplary, McHugh-Russell argues that the authority of that project’s indices (quantitative indicators of the state of business regulations and property rights’ protection across 190 economies) depends more on ‘data[ist]’ or ‘scientific’ referents than ‘political process’ or claims of moral rectitude or legitimacy. He writes: ‘the project draws much of its authority from empirical data correlating indicator values with economic benefits, and on (ultimately flawed) statistical methods […] characteri[sing] those correlations as causal’ (McHugh-Russell 2019, p. 404).

 Whereas positivist jurisprudence and the international legal doctrine of sources have long identified law’s normative force as emergent from facts of recurrence or custom, and/or from efforts of lawmakers, whether legislative, executive, or judicial, to navigate (often, it is said, to ‘balance’) fundamental conflict among prevailing values and interests, McHugh-Russell tells a different story about the provenance of law. In McHugh-Russell’s telling, law is ‘grounded’ (insofar as it is) in data science and statistics. McHugh-Russell points to Sam Schueth’s work, for instance, showing how the Doing Business project has ‘reshaped […] corporate law and property, customs, and tax administration […][and] labor law’ in Georgia (McHugh-Russell 2019, p. 403). The outputs of the Doing Business project are not well described as prototypes because, at least until the project’s recent pause, their basic design was not a matter on which feedback was actively sought, discounting modest methodological tweaks made in response to criticism. Nonetheless, they do exhibit the propensity for continual drawing in of new data and updating of analytics as an ever-shifting basis for authority. In this way, McHugh-Russell’s study amplifies a point made in P2P: that what is transformed in the shift to prototyping is not just how and what states and international organisations ‘see’, but how governing force gets authorised on the international plane.

Where McHugh-Russell’s analysis departs from P2P, however, is in identifying the operative vector of governance in this mode as ‘knowledge’. As I have emphasised in other work, the global turn to data analytics for governance of the kind documented in P2P has been associated less with a shift towards knowledge-making than a shift towards sensing; the latter does not necessarily entail any effort to make sense of or extract coherent meaning from that which is sensed (Johns
This is significant because ‘knowledge’ remains relatively close to the processes of justification and persuasion with which legal processes and institutions are supposed to be allied (at least in democratic settings), whereas sensing is largely indifferent to these. Satellite image data might be used occasionally to help justify a particular legal or policy position (in argument regarding states’ use of armed force for instance), but the tapping and automated analysis of unstructured data from a satellite does not purport to reason, justify or persuade when it ‘reports’ on worldly conditions (Johns 2017). This means that the kinds of critical moves that have often attended knowledge-making on the international plane—highlighting the biased, inaccessible, incoherent or incomplete knowledge basis for a particular legal argument or practice—may not touch the governance style highlighted in P2P. The authority of the latter depends not on reasoned rightness or representativeness of the data in question so much as other qualities: timeliness, availability, profusion, and apparent usability—and, as Leiter and Petersmann discuss in this special issue, scalability.

Governance in this mode absorbs into itself conditions and undertakings traditionally cast as exogenous to or contextual for law, including political design questions and various expert methods of data collection and analysis. Law in this mode is not validated by reference to the social or the political from which it is presumed separable (cf. Tomlins 2007). Contextual information is made internal to the law, albeit in pre-formatted ways aimed at “allocat[ing] the right experts [to] the right problems” (Soushiant Zanganehpour as quoted in Desai 2021, p. 12). Law so understood is non-autonomous and demanding of continual validation from a range of ‘stakeholders’ from whom ‘unceasing’ feedback is sought (Desai 2021, p. 12). As Larry Catá Backer has observed in a different context (examining ‘social credit’ management systems in China and the West), ‘qualitative and quantitative regulatory measures […] increasingly fold one into the other’ in configurations in which ‘the econometrician, the statistician and the moralist may have as great a voice as the lawyer or the judge, and the politician or administrator’ (2021, pp. 105–106, emphasis in original). To underline what is distinctive in this governance repertoire: law and policy so styled no longer purport to be reacting to inputs from outside; their authority no longer depends on autonomy from politics, economics, or society. Rather, they absorb into themselves the changing preconditions of their making. This narrows the space for, and defuses the potency of, external critiques of law: that is, any critique that ‘accepts the notion that the law as a whole, or some part of it, is coherent [or proceeds as if law were coherent] […][and] criticizes [that law] either because it has a suspect origin or because it had bad effects’ (Kennedy 1997, p. 92). It does not, however, rule out possibilities for internal critique; indeed, it may enlarge the repertoire of internal critique to encompass prototypes’ non-optimising use or misuse, a prospect to which I will return at this article’s end.

Desai and Lang have elsewhere sketched out a research agenda (employing the term ‘global un-governance’) around governance practices of this kind, characterised by a concerted effort ‘to encounter, produce, and harness, their own indeterminacy (or the experience or expression of it) as a generative principle’—that is, practices that take the ‘impossibility of closure’ as ‘an enabling precondition’ for governance, ‘rather than an obstacle to be overcome or managed’ (2020, p. 220;
228). This goes beyond ideals of democratically responsive governance because the concern is no longer to try to stabilise, balance or synthesise a diversity of political views and lived experiences, but rather to put in place law and policy that is end-lessly and dynamically expressive of that diversity.

The work published so far under the rubric of ‘un-governance’ usefully connects the practice of prototyping in the development and humanitarian field—to which P2P drew attention—to an array of other ‘techniques and practices of institution building’ that ‘put institutional forms in motion in a way that […] provides the impetus for ever-more re-arranging’ of those forms (Lang and Desai 2020, p. 230). At the same time, the shift of attention from prototyping towards global un-governance lends the inquiry a generalized quality. Desai and Lang acknowledge that it can be difficult to distinguish ‘global un-governance’ from that which preceded it; ‘[s]ophisticated experts have always used claims of indeterminacy, ignorance and uncertainty as an integral part of their standard arsenal’ and ‘[n]eoliberal institution-building […] has […] been experimental in form and […] based on explicitly limited knowledge’ (2020, pp. 232–233). Indeed, in its Lefortian conception, liberalism is by definition ‘instituted and sustained by the dissolution of the markers of certainty’ (Lefort 1988, p. 19, emphasis in original). Accordingly, it can be difficult to keep hold of the points at which ‘un-governance’ breaks with liberal or neoliberal governance proper.

This loss of bearings is helpfully addressed by Van Den Meerssche and Gordon in their study of ‘a remarkable reorientation in the intelligibility of governance practices authorized under law’ apparent in the work of the World Bank (2020, p. 269). Their compelling account of the Bank’s embrace of a risk- and resilience-based logic of governance shows how this ‘reconfigures the orthodox temporal and spatial coordinates of institution-building’ (Van Den Meerssche and Gordon 2020, p. 288). Importantly, they situate the emergence of this ‘new normative framework’ in ‘a longer genealogy of attempts to register and enroll the surplus of life’ characteristic of Foucauldian governmentality (Van Den Meerssche and Gordon 2020, p. 293).

In Foucault’s work, this ‘surplus’ surfaces from time to time (Vatter 2009). It surfaces, for example, when Foucault indicates the degree to which, despite the modern prevalence of bio-power, life ‘has [not] been totally integrated into techniques that govern and administer it; it constantly escapes them’, an escape evidenced by the fact that ‘famine exists, on a greater scale than ever’, for instance (1990, p. 143). It is also apparent in Foucault’s discussion of the positive tasks of the state and the ‘problem’ of the state needing to maintain ‘power of intervention in the behaviour of people’ (from which problem liberalism is said to have ‘originated’). Among these positive tasks is that of ‘permanently increasing production of something new, which is supposed to foster the citizens’ life and the state’s strength […] to govern not by the law [understood in this context as a matter of negative prohibition], but by a specific, a permanent and a positive intervention in the behaviour of individuals’. This extends, Foucault continues, to the imperative of ‘manag[ing] […] living inter-relations between […] two types of living beings’, the population and environment, so as ‘to take care of men as a population’ (2001, pp. 415–416). Economic life is to be nourished by a governance framework comprised of ‘contingent creations’ that are ‘constantly adapt[ed] […] to scientific discoveries […] [and] to changes in the
structure of society’ (Louis Rougier as quoted in Foucault 2008, pp. 161–162). With reference to this account of bio-power as aimed at both maintaining and managing the continual production of ‘something new’ that ‘escapes’, Van Den Meerssche and Gordon suggest that what I have approached more narrowly as prototyping is indicative of the ‘introduc[tion] [of] a new governmental practice into the situation’ that Foucault described in his studies of governmentality (Van Den Meerssche and Gordon 2020, p. 295).

This connection to the genealogy of governmentality and bio-power is illuminating. Yet what gets muddied in this ‘situating’ is the basis for the claim to ‘newness’. If un-governance—or, for my purposes, prototyping—are continuations of bio-power, well captured by Foucault’s analysis of this phenomenon in the 1970s, then it becomes unclear what qualifies them as ‘part of a remarkable new development in a condition of governance’ (Van Den Meerssche and Gordon 2020, p. 299). The emphasis that Van Den Meerssche and Gordon place on resilience—that is, the governmental cultivation of resilience to try to maintain productivity growth—seems key to this differentiation (although scholars of resilience-thinking are divided as to its novelty (Chandler 2014, p. 51; Evans and Reid 2015, p. 157)). Nonetheless, the operative points of distinction between governmentality and this ‘new development’ remain rather unspecified.

Sharpening of these differences may be aided by attention to how far the targets or topoi of governmental practice have moved away from those around which bio-power revolved in Foucault’s description (that is, populations and individual subjects). Two such shifts, in particular, are noteworthy: first, the backgrounding of populations behind the dazzle of digital aggregates constituted otherwise (constituted, that is, without adherence to the statistical thinking characteristic of the crafting of populations for bio-political governance) (Johns 2021a; see also Isin and Ruppert 2020); and second, the extent to which digitally mediated, prototyping governance practice often takes effect without the interpellation or tutelage of individual subjects towards entrepreneurial ends (Johns 2021a; see also Tazzioli 2022). That is, subjects do not need to be made recognisable as such, to themselves or to governing authorities, to be encompassed by governance practice advanced prototypically, in contrast to the classical Althusserian account of subjectification (Althusser 1971, p. 174). As Antoinette Rouvroy and Thomas Berns have observed, of digitally mediated governance involving algorithmic analysis, it ‘produces no subjectification, it circumvents and avoids reflexive human subjects’ (2013, p.10). Prototyping may enrol DIY tinkers, as P2P argued, but it does not need them to recognise their own subjectivity as such to be governed. Both the foregoing shifts are apparent in the governmental practice of prototyping, and both break somewhat with governmentality.

It remains the case, as Foucault described, that for governmental purposes ‘the field [to be governed] is left open to fluctuating processes […] [and] action is brought to bear on the rules of the game rather than on the players, and […] [that] there is an environmental type of intervention instead of the internal subjugation of individuals’ (2008, pp. 259–260). Nonetheless it is doubtful that this is a ‘theme-program of a society’ composed in the way that Foucault anticipated (2008, p. 259). Society—specifically, ‘a society subject to the dynamic of competition…an enterprise society’ (Foucault 2008, p. 147)—is not the point of application of many such
governmental interventions nor the nub of many laws and policies being adopted (although it is for some). Governmental collaboration with digital platforms enjoying extraordinary market dominance, for example, does not, in many instances, treat ‘multiplication of the “enterprise” form within the social body’ as ‘the formative power of society’ (Foucault 2008, p. 148). Rather, many such collaborative exercises seem aimed at effecting a shift towards digitalisation regardless of how this may or not correspond to societal change, and without apparent concern to promote competition.

An example of a prototype so operating—guiding decision-makers to embrace contingency via digital aggregates—is PLJ’s online platform and ‘research prototype’ MIND (which stands for ‘Managing Information in Natural Disaster’) (Pulse Lab Jakarta 2019a). MIND assembles ‘non-traditional’ sources of data regarding the human impact of selected natural disaster events and makes these available for a limited period after each such event to inform governance decision-making and guide the deployment of remedial resources. It presents information from social media (Twitter), conventional media sources (from ‘a credible news API’ spanning some fifty English-language news websites (Participant D 2019), crowd-sourced references (Wikipedia, OpenStreetMap) and Google search trends, that satisfies certain pre-specified parameters. It depicts this information in a dynamic, online map format, using open-source mapping and route-planning applications. According to PLJ, the platform is ‘designed to complement existing disaster response tools’ to ‘aid logistics planning and information management following natural disasters’ by ‘publicly providing stakeholders with timely insights on affected areas, [and] the needs of communities’ (Pulse Lab Jakarta 2019a). The events featured are those that are the subject of disaster alerts from the Global Disaster Alert and Coordination System (GDACS): an automated early warning system created in 2004 by the United Nations (UN) and the European Commission.

MIND invites those charged with governance (that is, with logistics planning, disaster response, information management and the like) in the immediate aftermath of a disaster to steer through contingency. It does not present the data that it marshals as necessarily true information; rather, it is data presented in anticipation of being surpassed, possibly contradicted. While using the platform, decision-makers are presented with continually changing, updating data—and even that only for the two-week window after a GDACS alert during which MIND is designed to operate. As one interviewee observed: ‘the whole idea is basically that MIND will be filling the gaps during the early days of information. Because… usually [after] two weeks, there will be… a new deep assessment… [and] after that I think there’s a lot of information that will feed into the whole humanitarian context’ (Participant AC and D 2020).

The posture of ‘early warning’ adopted by MIND is assertive; after all, warning is classically recognised as a forceful, illocutionary utterance, intended to inspire fear and prompt action (Austin 1975). Yet MIND is also designed to elicit openness to any number of possibilities. One interviewee explained the rationale for MIND as follows: ‘what we are trying to see is basically will it be possible to complement [existing] information with a different kind of information… basically saying[:]: “Hey, probably you have to look into other kind of possibilities”’ (Participant AC
and D 2020). The option to include ‘customised layers’ whereby users incorporate ‘their own data set’ into MIND underscores this (Pulse Lab Jakarta 2019a). The basic parameters for action that MIND impels its users to take are cast as uncertain. Even the question of when a particular natural disaster should be deemed to have started is indeterminate in the context of MIND, as one of our interviewees indicated, speaking of the difficulty of determining when a cyclone becomes worthy of MIND’s attention:

We haven’t really figured out… that one because the cyclone alert[s] that are coming from GDACS…[arrive] when [atmospheric and meteorological hazard data] starts to build up… So, information is start[ing] to flow] even earlier before even the disaster, [before] the cyclone hit[s] countries… the alert that [is] coming from GDACS also make[s] this very difficult. So… for the cyclone one[s] we still need to do manua[l] update[s] because… it keep[s] changing over time (Participant AC and D 2020).

At the same time, prototypes like MIND are aimed at funnelling contingency towards certain actionable pathways. MIND incorporates data from OpenRouteService (an open-source route planner developed by Heidelberg Institute for Geoinformation Technology at Heidelberg University) to help identify suitable routes for the transportation of aid and resources by reference to ‘strategic points of interest’ such as schools, hospitals, government buildings, airports and ports (Pulse Lab Jakarta 2019a). The messaging is clear: MIND is designed to elicit action in the mode of short-term remediation, under conditions of uncertainty, in a fashion largely accepting of existing institutions and conventional ‘strategic points’ of entry, distribution and governance. Whether any of the alternative possibilities embedded within MIND’s ever-shifting data arrays might potentially be realised, or how conflict among its various sources of authority should be resolved—these are matters set aside.

To summarise this section, prototypes invite governance in ways distinguishable from governance exercised otherwise. First, governance is authorised by the marshalling of sensory data and its (often automated) analysis, with reduced emphasis on reasoned justification resulting in a deactivation of critique aimed at eliciting (better) reasons for decision. Second, prototyping dispenses with any insistence on law’s autonomy and hence narrows the space for external critiques of law. Third, prototyping tends to overlay the traditional terrain of governmental intervention and mobilisation—populations and individual subjects—with non-population-like digital aggregates and bypass subjectification. Accordingly, critical scholarly ‘correction’ of these practices’ representation of populations and subjects (to ensure greater inclusivity, for instance) might not effectively counter or engage governance-by-prototype at all. Fourth, prototyping both nurtures and structures contingency for governance so that legal scholars’ ‘struggle to recover contingency’ may have political ramifications other than those commonly anticipated (Venzke and Heller 2021, p. 19). Scholarly efforts to denaturalise prevailing norms and institutions by highlighting their contingency mimic rather than counter governance-by-prototype. These features of governance-by-prototype were prefigured by earlier measures and techniques as the next section explains.
Sanctions as Prototypes Prefigured

P2P suggested that the rise of prototyping for governance on the international plane is linked to the relatively recent surge in national governments’ and international institutions’ interest in making use of digital technologies and data to inform law- and policy-making and other governance decision-making. However, as with the use of digital technology in international relations and cross-border military surveillance (Johns 2019b), governance-by-prototype was prominent also during the Cold War. Sanctions, first formalised as an international legal enforcement measure in the League of Nations Charter, but really only mobilized from the mid-twentieth century onwards (Thouvenin 2019), similarly utilise the prototype format. That is, they take the form of a preliminary working version—something that, unlike a template or standard form, is at least provisionally complete—and derive legitimacy, in part, from their openness to revision in view of later input. The sanctions regimes currently maintained under UN Security Council resolutions are indicative. The resolutions in question tend to be ‘open textured’ and to presuppose their further, technical encoding and implementation (Roele 2016, pp. 201–203). The Committees charged with overseeing and orchestrating this work operate under term-limited mandates requiring regular renewal, compounding the impermanence associated with the ever-changing composition of the Security Council itself (except for its five permanent members) (Roele 2020, pp. 120–123).

Moreover, as a range of scholars have documented, since the mid-late 1990s, UN sanctions have increasingly been given ‘smart’ or ‘targeted’ form whereby the people, sites and things to which they attach are specified, from time to time, on lists maintained by expert committees (Dörfler 2019; Sullivan 2020). These sanctions committees, often acting on the advice of expert monitoring groups, engage in continuous processes of listing and delisting of targeted individuals and entities in view of new input, and sometimes in response to delisting requests. The lists appended to UN sanctions also get reformatted for purposes of sanctions’ monitoring and enforcement: as biometric and PNR (passenger name record) data, for instance, so that sanctions’ force may be transferred to no-fly lists held by air carriers and incorporated into smart border technologies (Sullivan 2020, pp. 103–126). Thus, as well as sanctions being adopted under mandates subject to rolling renewal, and their content being continually updated through listing and delisting, they are subject to recurrent reformattting.

In these ways, the UN sanctions regime incorporates prototyping: it constitutes a proto-jurisdiction that gets continually re-activated by the operation of listing. Each listing or delisting decision—distributed across a ‘traffic of letters’ (Roele 2020, p. 130)—reshapes the scope of the sanction afresh. Prototyping in this fashion seeks to internalise, within the international legal order, a more rapid pace of change than standard regulatory alternatives might accommodate, as well as a capacity to imbibe data from a variety of sources, all by way of mimicking and seemingly getting ahead of the ‘surplus of life’ discussed above with reference to Foucault’s work. Speaking in 2009 about the UN Sanctions adopted against the Taliban, Al-Qaida and the Islamic State in Iraq and the Levant, then-US Ambassador to the UN, Susan Rice...
remarked: ‘[t]he whole purpose […] is to make the [sanctions] regime and the list a living process […] that [is continually] refreshed and renewed’ (Susan Rice as quoted in Sullivan 2020, p. 189). The procedure adopted by the UN Security Council for maintaining this ‘living process’ has been the focus of recurrent critique for want of transparency and fairness, yet these critiques have been de-barbed by successive rounds of incremental reform (Sullivan 2020, pp. 208–213). Sanctions are always in the process of becoming smarter, better, ‘more vibrant’ and hence outpacing the criticisms that might otherwise dog them (an interviewee as quoted in Sullivan 2020, p. 97).¹

The practice of reading sanctions from this century and the last as prototypes indicates several things. First, it highlights that prototyping as a distinctive technology of global governance is of somewhat older provenance than P2P suggested. This is significant not so much as a matter of ‘getting the history right’, but because it puts prototyping into the context of a set of debates, capacities and conflicts that are different to those on which P2P focused. In other words, the politics of global prototyping-for-governance is not just associated with the influence of Silicon Valley and the rise of digital platforms on which P2P placed emphasis (although it is so associated) and its course is not going to be wholly determined by developments in that domain.

Second, somewhat ironically (given its look back to the Cold War), the foregoing account suggests that critical international legal scholarly effort might be better directed by being somewhat less focused on tracing law and policy outputs decisively back to historical sources (which the foregoing analysis suggests are composite and cumulative) and somewhat more focused on the movement and merger of governance styles in the present. This is a noteworthy shift of emphasis given how much scholarly attention has been devoted, in recent decades, to revisiting and rewriting international legal histories with a view to opening up latent possibilities in the present (see Venzke and Heller 2021). When addressing practices of governance-by-prototype, open to ever-changing possibilities and endlessly revisiting original premises, these critiques miss the mark.

Third and relatedly, prototypical governance is as much a technological innovation of the public sector as the private sector. The spread of prototyping-for-governance suggests a convergence of ‘security’ techniques across military, policing, business, welfare, humanitarian and not-for-profit sectors: not that everything is indistinguishable across these sectors, but that developments across them are co-constitutive or co-resonant. It has long been recognised that governmental techniques cultivated in a developmental register (with an orientation towards maximising productivity) move quite readily into registers of security (with an orientation towards maintaining monopolies on force) and vice versa; prototyping spans these registers as well. As much as states and societies may be said to be being ‘platformised’ by ‘the dynamics of the market’ and the strategic investments of digital platforms (de Kloet et al. 2019, p. 250), the developments to which P2P alluded would not be underway without the enabling and directive effect of public policy

¹ See also, for exemplary legal scholarly concerns about sanctions governance Aolain (2021).
decision-making and public sector investment. In other words, digital platforms are being ‘governmentalised’ too. Governance power seems to be taking increasingly conjunctive forms: emanating from, revolving around, and disassembling state-market, public-law/private-law combinations.

Fourth, the reading of sanctions as prototypes is a reminder of those aspects of the conventional critical repertoire to which prototypical governance power tends to be inured. P2P observed that the orientation of prototyping towards continuous improvement is such that ‘what might once have seemed quite radical, hard-hitting projects of critique… may now come across as projects of minimalist optimisation, or even affirmation, leaving the conditions and inequities that precipitated that critique quite undisturbed’ (Johns 2019a, p. 836). UN sanctions’ progressive development underscores this, the program having proceeded in constant, generative dialogue with critics without much revisitation of first principles or presumptions (Brubaker and Huvé 2021). Indeed, Gavin Sullivan has observed that periodic reform of UN sanctions regimes has been ‘seized productively as an opportunity to foreclose debate and deflect critique’ (Sullivan 2020, p. 221).

Planning and Prototypes

In P2P’s analysis, planning was more vulnerable to critique than prototyping. This was because of the extent to which legal scholars’ critical armoury had been forged and sharpened in battles against centralised power, and because of prototyping’s provision for endless optimisation. The contrast between planning and prototyping may, however, have been somewhat overstated in that context. In the years since the publication of P2P, my collaborators and I have remained in dialogue with PLJ about their ongoing work—work documented in P2P in a brief and stylised way based on research conducted during the Lab’s earliest years. There have been several changes in the Lab’s senior leadership since and newcomers to the team have brought their own experience to bear on its work. In 2019, with a new influx of funding from the Australian Government, PLJ announced itself to be ‘repositioning’. Whereas its first seven years had been dedicated, in large part, to ‘modelling and piloting ways in which big data could provide actionable insights on development issues in a more timely and cost-efficient manner’, PLJ envisioned itself playing a somewhat different role thereafter (Pulse Lab Jakarta 2019b).

On PLJ’s ‘repositioning agenda’ was a concern to ‘[p]romot[e] [their] branding/niche as a mixed-methods approach data innovation lab with a proven track record of adherence to our principles, values and the responsible and ethical use of data’ (Pulse Lab Jakarta 2019b). References to ‘big data’, “digital technology” and “data science” were notably scarce on this agenda. The goal was no longer primarily to showcase the potential for ‘big data’ to ‘deliver public value’. Rather, PLJ’s distinctive contribution would hinge on ‘collaborat[ion] […] between PLJ’s Data Science and Social Systems teams’ and their combined capacities to ‘ground-truth insights from big data analysis’ (Pulse Lab Jakarta 2019b). That is, PLJ sought to go beyond technical practices of ‘ground-truthing’ most familiar to data scientists, such as validation against a pre-existing, labelled dataset: official government statistics,
for instance (see generally Jaton 2021). PLJ aimed to showcase, instead, how such ground-truthing might be supplemented by having social scientists generate purpose-built datasets (from fieldwork) expressly for the purpose of testing data science outputs. The anticipated outputs of this work changed too; instead of models and pilots, PLJ sought to ‘research and develop fit-for-purpose innovations’ through ‘longer-term partnerships’ and ‘more effective relationships’ with their ‘key governance stakeholders’: primary among them, as at PLJ’s founding, the UN (through UNDP) and the Indonesian Government (Pulse Lab Jakarta 2019b).

In repositioning itself, PLJ also made explicit its focus on helping to deliver, in measurable ways, on ‘the UN Country Team in Indonesia SDG results frameworks and the Government of Indonesia’s Medium Term Development Plan 2019–2024 targets’. In addition, PLJ sought to be ‘a catalyst for a strong data ecosystem in Indonesia and the Asia–Pacific Region’ (Pulse Lab Jakarta 2019b). UN Global Pulse had always been a relatively loose alliance of ‘labs’ proceeding on different continents under quite disparate funding and governance arrangements, while remaining in regular contact with one another. Now, after this 2019 reboot, PLJ seemed to assume a more explicit geo-political location and set of priorities. As one of our interviewees noted, ‘there’s increasing ownership [of PLJ] from [the] Government of Indonesia’ (Participant AH 2020).

Throughout the life of the Lab, but especially as it has matured as an organisation, data scientists in and around PLJ have been candid and thoughtful about the limitations of the prototypes they develop. For example, one of our interviewees expressed reservations about the prospect of the MIND prototype (discussed earlier) being developed into a global product (Pulse Lab Jakarta 2019a). They remarked:

I’m not enthused about doing this globally very quickly yet… It is useless in some countries... And then you have different languages... So... the ideal scenario for the next phases is... if you can get the funding to then do a customised version for a particular user. And partly use this money to also properly open-source the core functionality. So, that it is highly modular. So, you can... add in additional modules... because... right now, we can’t do well with other languages. Anything that is not West Germanic is difficult to handle in MIND or in a lot of our other work (Participant AC and D 2020).

P2P suggested some correspondence between the practice of prototyping digital tools for governance and the ‘lean start-up’ approach to business development and financing popularised by Eric Ries (Johns 2019a, pp. 855–856). The preference for ‘open-sourc[ing]’ prototypes to make them ‘highly modular’ apparent in the remarks above is still commensurate with this approach (and with Andrew Lang and Deval Desai’s analysis in this special issue). Yet at the same time, the data scientists with whom my collaborators and I have been speaking over the past few years seem increasingly wary of the kind of hubris that often travels with Ries’ lean start-up thinking (an observation consistent with one made by David Chandler in this special issue). The worries of another data scientist interviewee are indicative:

I guess it’s almost like a new religion... [the belief that] there is truth inherently in the data, that the data has the ability to fix... a particular problem... [some
data scientists] don’t understand—they probably do understand the complexities, but they think that the data can solve that... as if all this information has the ability to fix everything and has the right to be used, or can improve things... Yeah, it’s almost like a religion [laughs] (Participant AE 2020).

Prototyping of the kind described in P2P is, thus, ongoing at PLJ and in many other settings, but is tempered by awareness of its limits. This underscores Chuncheng Liu’s reminder, in a recent engagement with P2P, that ‘the transformation of statecraft does not happen in a comprehensive and once-and-for-all manner, as the state itself is often fragmented in a way that requires specific analysis’; moreover, the state’s ‘traditional ways’ have long included self-critique (2021, p. 20). Isobel Roele has likewise cautioned against ‘overstat[ing] the discontinuity’ between bureaucratic planning and managerial approaches to governance within the UN (2021, pp. 10–11).

In addition to Liu’s and Roele’s work, the work of Sahil Dutta and colleagues helpfully sheds light on how the traditional statecraft of planning has shifted over time (as do Lang and Desai’s and Andrea Leiter and Marie Petersmann’s respective articles in this special issue). The title of P2P wrongly suggested a relationship of succession between planning and prototyping, although the body of the text hopefully disabused readers of that impression. Dutta et al. have, for instance, noted the ‘strange non-death of planning’ throughout the late twentieth century, despite supposed neoliberal antipathy to plans and planning (2018, p. 168; 2019). Their work suggests (as does Roele 2021) that recent prototyping practices are best understood within the history of neoliberal managerial planning not as a divergence from that history. This is especially apt when one takes account of the modularity characteristic of neoliberalism discussed in my other work (Johns 2015) and by Lang and Desai in this special issue.

In summary, the argument of P2P is best read alongside the work of other scholars, including contributions to this special issue and prior work on sanctions regimes, to modulate impressions that P2P created of the newness of prototypical ‘ways of seeing’ and doing. This does not negate, however, the argument made in P2P as to stylistic shifts in governance practices and their propensity to elude legacy repertoires in critical or reformist legal scholarship.

State Changes: Prefiguring Non-Optimisation Or Use-as-Internal-Critique

What state changes in international law may be called forth in connection with the proliferation of prototyping in international legal work? These will need to be teased out collaboratively over time: work already underway in this special issue. Nonetheless, one feature that is both noteworthy and paradoxical is prototypes’ presentation of strange—even untenable—notions of the human user.

Groups such as the MIT Media Lab, Stanford’s Legal Design Lab and the Danish Design Centre have been championing ‘human-centred’ prototyping of law and policy over the past few years, mostly at a national level. Stanford’s Legal Design Lab,
for example, publishes a Legal Design Toolbox inviting users to develop a ‘new product’ by employing a range of ‘tools to prototype’, with links to a range of open-source software programs (Stanford Legal Design Lab 2014). Those who champion prototyping as a governance technique celebrate its ‘ensur[ing] that laws are fit for purpose and useable to the general public’ while recognising ‘inherent constraints’ (Benichou et al. 2021) and political ramifications (Kimbell and Bailey 2017).

Not commonly remarked upon in studies of this field is what the practice of ‘human-centred’ prototyping for governance typically make of the ‘human’. This is a figure that has discrete problems and looks to an international law or policy ‘designer’ to deliver tailored solutions to these. Their input is mostly reactive: pointing out things that do or do not work in a particular prototype in their capacity as ‘user’, engaging with interfaces with a view, always, to optimising and extending them. Moreover, only certain humans qualify as ‘users’; the assembly line worker, contract data labeller or rare earth mineworker whose labour is essential to the availability and accessibility of digital data—and hence to prototype development—are not among the humans centred in this process; neither are those who engage in unauthorised uses, such as those who, struggling to survive, haul away some piece of remote sensing kit to sell it for scrap (Singhvi et al. 2018). As David Chandler observes in this special issue of other efforts of inclusive relation (focusing on their being undertaken without regard to the racialised structuring of power), prototypes’ responsiveness to user feedback may be based on a denial or restriction of capacities rather than their extension, evoking a ‘ruse’ of user unboundedness. As if to acknowledge all that goes misrecognised by the figure of the ‘user’, prototypes often invite incessant updating and re-inscription of user avatars.

This version of the human might arguably be fitting (albeit restrictively so) for some tasks and constituencies in the international legal arena, but much of the work of developing and invoking international law is not a matter of solving known problems for known clients. Much of international law and policy is concerned with creating possibilities for struggle, survival and collective action under conditions that aspire to be less violent and less prone to domination than might otherwise be the case. Less generously, much international legal work is about repetitively, infrastructurally maintaining conditions favourable to the accumulation of capital and power. These are the kinds of fraught, often inarticulate activities that current versions of international legal prototyping tend to leave untried or undisturbed. Indeed, these are the kinds of activities that prototype users are encouraged to move or look beyond in the prototypical haste to optimise performance on assigned tasks.

Keeping this forefending, optimisation-focused human user in place, amid all that clamours for users’ concern, is never going to be easy. Those who study technology use emphasise how much playful rule-bending and expectation-defiance is almost always involved in user take-up of new platforms or tools, especially among those for whom day-to-day survival is at stake (Arora 2019). And when a prototype employs machine learning to learn from use, any such ‘misuse’ is constitutive, not incidental. Accordingly, the expectation of relentless user focus on prototype improvement is always going to be a struggle to sustain. Indeed, the human of ‘human-centred’ prototyping of law and policy for governance is so optimisation-focused, so oriented towards stated purposes and
assigned feedback loops as to be almost unintelligible as a human. But perhaps that is precisely what is worth drawing out about this figure. The point may be to make prototypical figures further from not closer to what we take to be our current reality.

Thinking of the MIND prototype discussed earlier, what if a project of this kind was oriented not towards the amplification of Google Trends and their like, but rather towards the ways in which ‘[a]nything that is not West Germanic is difficult to handle’, as noted above? In other words, what if the visibly recorded uses of MIND included forms of use aimed at demonstrating the occlusions of a prototype premised on West Germanic language use, not to remedy those occlusions but to recast and resituate the prototype entirely? Alternatively, what if user input were collectively organised to call MIND’s framing of ‘natural disaster’ into question and direct user attention elsewhere? Imagine, for instance, a strategic deluge of tweets from a disaster-affected area that spoke to endemic issues of poverty or biodiversity loss rather than those disaster impacts identified as newsworthy by the relevant news API and Google Trends. Digital recognition of others so engaged (through MIND’s Twitter layer, for instance) could potentially prompt political organising without those involved necessarily having to meet in person (much has occurred among some K-pop fans: Lee and Kao 2021). That organising could involve nonhumans—bots, for instance—as well as humans.

Use of governance prototypes in non-optimising modes could raise questions about their politics in registers not easily deflected—that is, questions that did not involve trying to pin prototyping on people and having them account for and improve themselves in a tinkering mode. For example, Claudia Aradau and colleagues employed the Droid Destruction Kit (a virtual machine image—a file that behaves like an actual computer—made available on GitHub, that allows anyone to examine data transmitted by Android apps) to ‘misuse’ Refugee.info: a website designed to help refugees to overcome language barriers and access information to assist them safely navigate routes to Europe (Aal et al. 2018). This showed that the website was transmitting data indicating the location of refugees in plain text format, without encryption, making an ostensibly protective prototype into a site of vulnerability (Aradau et al. 2019). And this was made apparent without calling forth any explanation from or attributing ethical shortcomings to humans involved in its crafting. Far from glancing off prototypes or doubling down on the power relations that they presuppose, as some other standard critical moves seem to do, such use-as-internal-critique might enter into the logic of prototyping and make its politics leverageable for the kinds of ‘dirty’ transversal politics for which Daniela Gandorfer calls in her article in this special issue.
Conclusion

P2P worried that the critical repertoire that legal scholars and other reformists bring to bear on contemporary governance practices might have become blunted and misdirected. It argued that many efforts to render prevailing governance regimes more inclusive or responsive tend to invite continuance or even expansion of the very practices on which they ostensibly train their sights because of the way that earlier iterations of those critiques have been metabolised into relatively new governance techniques, such as prototyping. Criticism aimed at countering the ‘top-down’ by reference to the ‘bottom-up’ often nurtures and extends prototypical power, it argued, rather than calling it into question.

This article has revisited and restated this argument, but also sought to build upon it. It has done so in three main ways. First, it has specified further how governance power exercised through or informed by prototypes relates to, and differs from, that advanced through other conceptions of law and practices of governance. Second, it has drawn out some threads of a more composite or serpentine genealogy of prototyping-for-governance than that sketched in P2P (which had focused on the public sector take-up of ideas strongly associated with Silicon Valley) as suggested by the prototypical features of UN sanctions regimes. Third, it has highlighted prototyping’s generative derealisation of the ‘human’ as a potential target for immanent critique advanced through non-compliant, non-optimising prototype use. Prototyping has not displaced planning as a commonplace legal and policy technique in the development field or anywhere else, but it is as least as significant. And it warrants theorisation, and formulation of an attendant critical, analytical and activist repertoire, in its own right—collective labour already underway in this special issue and beyond.

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