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Title Page

Speculating on Sovereignty: 'Money Mining' and Corporate Foreign Policy at the Extractive Industry Frontier

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Abstract & Keywords

Abstract: In this article, I examine the capacity that 'technologies of the imagination' have to suture routinized financial practices in the City of London to the opening up of new extractive industry 'frontiers'. I focus on the political risk rankings through which host jurisdictions of speculative projects are assessed, and the selection of discount rates in the valuation of prospective mines. By treating these as technologies of the imagination - rather than calculative devices - the significance of the meaning created by mining professionals as they generate images of 'politically risky' territories or jurisdictions prone to 'resource nationalism' comes into view, along with a particular deployment of international investment law upon which speculative activity in the junior mining market depends.

(**119 Words**)

Keywords: speculation; extractive industries; political risk; frontiers; resource nationalism

Main Text

Introduction: Fact, Fiction & Imagination in a Speculative Economy

In the anthropology of finance, the junior mining sector has been treated as a paradigmatic case of speculative - or 'spectacular' - accumulation (Tsing 2000), depending as it does on the generation of hype in order to raise funds before the promise of a putative mineral deposit can be reliably known. Where anthropologists concerned with the excesses of speculation have been attentive to performance, hype and affect (Hertz 2000; Igoe 2010; Sunder Rajan 2005) sociologists of finance have tended to emphasize the role played by *facts* - adequate and stable representations of prices, rates and other market mechanisms - in coordinating market activity and settling financial transactions (MacKenzie, 2007, p. 358; MacKenzie, 2009; Millo et al. 2005). Indeed, Arjun Appadurai has recently differentiated between these two approaches - the 'cultural' and the 'social' - to the study of finance, arguing that the attention given to calculative procedures in the social studies of finance is insufficient for coming to terms with a generalized speculative 'imaginary' that pervades contemporary capitalism (Appadurai, 2011, pp. 523-24; see also LiPuma and Lee, 2004, p. 42). Sociologists of finance have likewise contrasted their own interest in the material bases of innovation, calculation and 'facticity' in derivatives markets (MacKenzie 2009, pp. 64-65) with work that emphasises the role played by novel imaginaries in making events and entities calculable and manageable through derivatives (Pryke and Allen 2000, p. 280).

Yet, contrasting a generalised speculative imaginary (and the generation of 'hype') with calculative practices that coordinate market action around stable economic facts parallels the problematic heterodox critique of 'speculative value' that locates real or fundamental value in productivity, and identifies the gap between book value and exchange traded value as fictitious, aberrant, or even fraudulent (Davis, 2017, p. 11; Elsner, 2015, p. 199; Henry, 2012,

p. 998; Hertz, 2000, p. 42; compare Konings, 2015, pp. 258-270). Indeed, as institutional political economists are keen to point out, to the extent that *all* corporate entities deemed "going concerns" are valued on the basis of future potential, it is not possible to extract the "real" or non-speculative component of value from any asset no matter how (un)productive they may transpire to be (Palan, 2013, p. 72; 2015, p. 381).

In an effort to sidestep the question of 'real' versus 'fictitious' value, pragmatist sociologists of valuation have come to displace the question of what value is with an interest in the arrangements through which value is apportioned and realized, or the role that calculative devices play in the 'construction of the objectivity of value' (Helgesson and Muniesa, 2013, p. 7; Hutter and Stark, 2015; Kornberger et al., 2015; Muniesa, 2011; Vatin, 2013). Jens Beckert's (2015; 2016) work on fictional expectations as the animating force in capitalist economies likewise dispenses with the apparent problem posed by a gap between real and measured value. Beckert attends to the *fictional* narratives that market actors use to model open-ended futures and their actions' likely consequences, arguing that it as an error to over-identify market devices that ostensibly determine future value with *effective calculations* of that future value. Instead, calculative devices (valuation formulas, pricing models and ranking procedures) ought to be recast as *narrative* devices that support the credibility of expectations about future economic performance (Beckert, 2016, p. 141; see also Sunder Rajan, 2005).

For Beckert, mathematical models used in investment decisions merely 'reassure actors and justify decisions despite the incalculability of their investment outcomes', and investment decisions are 'the outcome of a communicative process in which decision-makers seek understandings of a given situation that are convincing enough to make the risks of their investment seem worthwhile' (Beckert, 2016, pp. 136, 167). Put otherwise, narratives constitute value via a 'staging of expected future returns on investment' (Beckert, 2016, p.140). While sharing with Beckert (and Palan) an understanding of capitalist action as

fundamentally future-oriented, I depart from Beckert's concern with fictional narratives, approaching speculative activity in London's junior mining market via a set of 'technologies of the imagination' (Sneath, Holbraad and Pedersen, 2009). Where Beckert's notion of fictional narratives displaces the problem of *effective calculability* of future value onto *effective staging of a narrative* sufficient to coordinate future-oriented economic action, the concept of 'technologies of the imagination' avoids the association of narratives with a 'coherent meaning-making capacity' (Zigon, 2014, p. 446) or an *instrumental* role in the coordination of capitalist action. Instead, analytical attention is shifted to the imaginative *effects* produced by socio-technical arrangements which inform, but do not determine, imaginative capacities.

Sneath, Holbraad and Pedersen's (2009) interest in technologies of the imagination emerges from their critique of a resurgent holism in the anthropological treatment of 'imaginaries' as shared horizons of meaning; a formulation not redolent of earlier approaches to culture as a fixed totality of meaning (cf. Appadurai 2011; LiPuma and Lee 2004). Equally, they write against the tendency to treat the imagination as instrumental or functional, as a mere representational precursor to action (see Ingold, 2000, p. 166). This instrumental approach is given particular salience in contemporary treatments of the imagination as a resource to be capitalized upon and a potential source of profit (De Cock, Rehn and Berry, 2013; Haiven, 2011), but can equally be detected in Beckert's approach to fictional narratives as devices which enable future-oriented economic coordination (see also Lai, 2006). To grasp the imagination on an ethnographic scale, Sneath, et al. advocate attention to the socio-technical arrangements which do not *determine* imaginative effects, but rather lend themselves to imaginative effects through particular 'affordances' or the 'multifarious uses to which such artifacts might lend themselves' (Sneath et al. 2009, p. 21; see Ingold, 2000). The terminology of affordances avoids any technological determinism, while recognising that

imaginative effects are generated through particular socio-technical arrangements. As such, it can be married to an understanding of the imagination as precisely that which cannot be fully conditioned, as a 'never fully determined, process of meaning-giving' which produces new rationalities, rather than being opposed to or constrained by them (Kompozoros-Athanasiou and Fotaki, 2015, p. 323).

The notion of technologies of the imagination lends itself particularly well to an ethnographic investigation of speculative activity in London's junior mining market, when speculative activity is understood as *generative* of economic arrangements, rather than merely a question of right or wrong guesses about future values (Konings, 2018a). Taking speculation as a fundamental form of economic life, rather than one which appears at the limits of calculative reason, it becomes possible to examine how speculative activity conditioned by technologies of the imagination involves *anticipating* profit under conditions of uncertainty (Bear, Birla and Puri, 2015, p. 390) and inducing others to enrol in your projects of speculative anticipation (Konings, 2018b, p. 16; Gilbert, 2019a) across significant geographical divides.

My particular focus here is on the capacity that technologies of the imagination have to animate speculative activity oriented towards opening up new resource 'frontiers'. When considering London's junior mining market, a more expansive geographical canvas than usually accompanies work in the social studies of finance is required if we are to understand the capacity that technologies of the imagination have to knit together routinized financial practices in the City of London, and the organization of resource extraction in distant locations. Treating calculative devices as technologies of the imagination also offers an opportunity to understand speculation as an ethically-charged activity, rather than a merely calculative, communicative or decision-oriented one (see Appadurai, 2011, p. 524; Maurer, 2002, p. 29; Miyazaki, 2003, pp. 260-261; Miyazaki, 2007, p. 305; Zeitlyn, 2012).

This article is based on multi-sited ethnographic fieldwork carried out in London's junior mining market, which is centred on the London Stock Exchange's Alternative Investment Market (AIM). AIM is second only to the Toronto Venture Exchange as a listing venue for mining 'juniors', the small mineral exploration firms whose value typically derives from a resource claim's promise, rather than its current productivity.[1] Launched as a high-growth low-regulation exchange in 1995, AIM's lax joining requirements troubled the financial press at the time (Hatchick, Collins and Smith, 1997). The Nominated Advisor (Nomad) system through which regulation is effectively outsourced from the exchange to the investment banking or brokerage houses who assist firms with the listing process continues to receive criticism from an array of organizations concerned with speculative mining investment.[2]

Rights and Accountability in Development (RAID) has accused the London Stock Exchange of fostering a culture of deliberate non-compliance among Nomads that allows mining assets acquired in conflict zones to be "asset laundered" and effectively transferred from AIM to the main Exchange (RAID 2011; 2012). Global Witness (2016) has likewise emphasized the ease with which "outright fraud" can be perpetuated by AIM-listed mining juniors lacking any productive assets, and reiterates former US Securities & Exchange Commissioner Roel Campos' description of AIM as a "casino." For NGOs like RAID and Global Witness, concerned with corruption and human rights abuses perpetrated by transnational corporations, what is at stake is the ability of speculative practices to knit together nominally regulated spaces (such as the London Stock Exchange) and more distant natural resource frontiers organized according to the logics of necrocapitalism, or accumulation through death and dispossession (Banerjee, 2008). One of the primary concerns of this paper is to highlight how particular technologies of the imagination provoke speculative activities that sutures together financial routine in the City of London, and extractive operations in distant locations, and to draw these more distant effects into the centre of ethnographies of finance.

As I show below, the use of ostensibly calculative devices as technologies of the imagination is also a way for speculators to reveal aspects of their own character and project ethical claims about their capacities (see Keane, 2008; 2010), and relies on certain ethically-laden assessments of host jurisdictions and their mineral extraction regimes. It is already clear that speculative activities entered into by AIM-listed mining juniors are also subject to ethical evaluation by *wider* publics. There is, however, a reluctance among both sociologists (MacKenzie, 2005) and anthropologists (Maurer, 2005; Maurer 2012) of finance to 'add "critique," moral injunction, or higher meaning' (Holmes & Marcus, 2008, p. 84) to the accounts that their informants provide of their knowledge practices. I argue here that it is not possible for ethnographers of finance to *avoid* grappling with critique, moral injunction and higher meaning - especially when technologies of the imagination that animate speculation rely precisely on these practices.

The specific technologies of the imagination with which I am concerned here are: firstly, the political risk rankings and ratings that junior mining firms use to reassure potential investors about the stability of their future earnings; and secondly the discount rate with which analysts, investors and self-described 'money miners' augment calculations of the Net Present Value of mines operating in putatively "risky" territories. Focusing on these particular technologies of the imagination allows me to move beyond the observation that the junior mining economy is inherently speculative, to the extent that mineral exploration firms must 'exaggerate the possibilities of their [prospects] in order to attract investors so that they might, at some point, find something' (Tsing, 2000, p. 119). There is a specific historical context against which the capacity that these technologies of the imagination have to incite speculative activity must be understood.

The years either side of 2013 were moments of acute anxiety in London's junior mining market, as investors sought out new extractive "frontiers" in response to apparent waves of

"resource nationalism" that seemed to be affecting more established, resource-rich nations. The mining market's conception of resource nationalism is expansive, but analysts typically saw the risk of contract review (including renegotiation of taxation and royalty rates) as the pre-eminent political risk. In other words, resource nationalism could be identified in those legislative acts that interrupt the certainty that a resource will deliver on its promise, and reduce calculations of its Net Present Value (Gilbert, 2019b). In response, mineral exploration firms were looking to less well-known jurisdictions, and working out how to "discount" valuations of projects in these frontier territories. Discounting often relies heavily on indices produced by self-described free market think tanks, but the interpretation of these indices (and the setting of discount rates) always relies on imaginative acts that exceed calculation. Also during this period, legal experts and consultants began to advocate the adoption of a "corporate foreign policy" toolkit by mining juniors, comprising a set of legal strategies for dealing with apparently resource nationalism-prone jurisdictions. By examining these approaches to corporate foreign policy, I show that the speculative search for new extractive industry frontiers depends upon a particular narrative about the 'rule of law' that naturalizes a recently-established and highly contested approach to international investment law; in particular, an approach to international investment law which treats the sovereignty of post-colonial resource-rich states as *conditional,* subject to transnational corporations' "legitimate expectations" about their freedom to contract and engage in speculative activity.

The first ethnographic section ('Multi-Sited Ethnography: Inside the Extractive Industry Bazaar') introduces the ethnographic context; tracing out the legal, geological and financial institutions and actors who work to generate speculative opportunities for AIM-listed mining juniors (or juniors planning to list on AIM). I focus in this section on the first technology of imagination under consideration, the political risk ratings and rankings through which host jurisdictions of potential projects are assessed. The next section ('Money Mines and the

Discount Rate') engages with a second technology of imagination, the discount rate used to calculate the Net Present Value of speculative mining projects. Here I draw primarily on ethnographic material collected from shadowing one particular mine valuation consultancy between 2012-2014 as they sought to convert analysts, fund managers and mine managers to their 'money mining' philosophy. Finally ('Corporate Foreign Policy: Resource Nationalism and the Rule of Law'), I discuss mining professionals' understanding of international law, which gives freedom to contract precedence over the sovereignty of resource-rich nations, and treats any threat to the freedom to contract and engage in the speculative pursuit of profit as an unjust act of 'resource nationalism.' In the conclusion, I reflect on the capacity of multi-sited ethnography to shed light on the ethically-charged and geographically expansive imaginative processes which animate speculation in the extractive industries.

Multi-Sited Ethnography: Inside the Extractive Industry Bazaar

The junior mining sector is made up of small firms specialising in mineral exploration or early stage production, often with a skeleton staff of as little as three mining professionals (an engineer, a geologist and an accountant) who have previously worked for one of the mining "majors" such as Rio Tinto, Anglo American or BHP Billiton. Juniors are often short lived. They either dissolve when attempts to transform mineral deposits into cash flow are met with failure, leaving their directors free to recombine and embark on new exploration ventures, or they are bought out by major mining multinationals when there is success.[3] AIM-listed juniors are frequently criticised for their poor social and environmental performance, and this is not unrelated to the fact that such firms are often loathe to spend money on impact assessment during the exploration phase, when a project's costs are high and production levels are at zero (Kirsch, 2014; Kneas, 2016). Majors and mid-cap mining firms explicitly rely on the exploration activities carried out by juniors in order to expand their own portfolios. While social affairs managers at mining majors are keen to 'bring juniors in' to

industry social responsibility schemes, it is not unusual for problems caused by irresponsible juniors to be dismissed as 'legacy issues' once they have been acquired (Gilbert, 2015b).

AIM is at the centre of London's junior mining market, but by no means coterminous with it. My ethnographic exploration of speculative activity in the junior mining market therefore involved "following the expertise" through which potential extractive assets are assembled, mimicking the connections that must be made for a project to succeed in the construction of my own 'field' (Amit, 2000, p. 6). Often this would involve attending expensive and guarded industry events, and observing the ritualised rehearsal of analysts' and investors' concerns and expectations for new 'frontier' territories (cf. Garsten, 2010; Rajak, 2011). At other times, it would involve 'ethnography by appointment' (Mitchell, 2010, p. 13; Ouroussoff, 2010), or structured interviews with those I had met at industry events, conditioned by the temporal constraints (and confidentiality requirements) imposed by their employers. On occasion, I participated briefly as a paid contributor or "consultant" for political risk and corporate social responsibility advisory firms, and became a member of professional bodies for mining analysts and mineral economists, regularly attending social events and 'Continuing Professional Development' days.

While some anthropologists have raised concerns that this mode of mobile ethnographic research produces 'thin' descriptions, I argue for the absolute importance of mobile fieldwork when the subject at hand is imaginative acts of speculation (and the technologies that provoke them) which knit together formal financial institutions in the City of London, and earth-shattering alterations of the social and geophysical terrain in distant locales. In spite of Latour's (2005, p. 179) injunction to focus on neither "capitalism" nor "the screen of the trading room either," but to the connections between them, social studies of finance scholars indebted to his material sociology have been *deliberately* selective in their attention to calculative arrangements *within* the offices of institutions in global financial centres, even

when those institutions trade in the currencies of "far-flung countries" (Hardie and MacKenzie 2009, p. 66; Beunza et al., p. 2006). In anthropology, meanwhile, something of a division has emerged between critical ethnographers who work with mine-area residents affected by fluctuating mineral prices, speculative land acquisitions and other trappings of necrocapitalism (e.g. Kirsch, 2014; Mantz, 2008; Smith, 2011; Walsh, 2004), and ethnographers working in global financial centres who tend to emphasize the parallels between financial and anthropological knowledge rather than proffer critique (Maurer, 2005, p. 190; Miyazaki, 2013, p. 46; Riles, 2013). My focus, however, is on speculative acts which knit together financial centres and prospective resource frontiers, and I approach technologies of the imagination as *ethically-charged* devices which deliberately 'reveal something of the person' of the speculator who deploys them (Keane, 2008, p. 35). This allows speculative acts to 'become available for moral judgement by others' (Keane, 2010, p. 72) - whether these are the peers of the speculator, human rights advocacy NGOs, private shareholder groups, or critical social scientists who do *not* find excessive parallels between their own knowledge practices and those of the mining professionals they study.

AIM is at the institutional centre of London's market for mining finance, but this market is geographically dispersed. Law firms, analysts, and brokerages based in the Square Mile; directors' clubs on Pall Mall; company offices in Paddington and Mayfair; and trade shows in London's larger exhibition centres are all key nodes in the circuit that funders, miners and consultants travel in the hope of putting together a profitable project. Technoscientific expertise is, of course, implicated too. A concern with the economic ends to which mineral deposits might be put has long animated the discipline of geology (Braun, 2000, p. 24) and the junior mining space is no exception. Each year in the Autumn, London's Geological Society hosts 'FINEX: Exploration Meets the City' in their well-appointed premises on Piccadilly. Perhaps more than any of the other similar events hosted year-round in the City of

London's livery companies and Chambers of Commerce, FINEX epitomizes the commercialization of geological expertise upon which mineral exploration depends. Partly a matchmaking event for financiers and geologists, FINEX also includes seminars from lawyers who advise on the key "political risks" facing the metals and mining sector, or provide detailed advice on navigating the mineral codes of newly attractive "frontier" jurisdictions. Alongside the networking and the expert briefings, FINEX and events like it always make plenty of time for the spectacle of the investor pitch.

Chief executives from mining juniors will take to the stage in an effort to attract the funds they need to transform their speculative geological finds into financially-productive assets. These performances are overtly coded as masculine and muscular, with speakers introduced via reference to, say, their previous career as an Australian rugby international (in the case of one Republic of Congo-focused exploration firm), or their Cambridge Blue in boxing (this time, the lead on a project in Sierra Leone). The audience is explicitly asked to assess the speculative potential of specific projects via the character of the person who represents them to the market. Evoking the practice of the colonial-era anthropologists who would often survey and document their fieldsites while looking out 'from the door of their tents' (Rosaldo, 1986) these muscular speculators frequently include – alongside financial statements, preliminary drilling reports and commodity price forecasts – images of their drilling camps in "the bush." On more than one occasion during my fieldwork (carried out between 2012 and 2015), these images of speculators, tents and drilling equipment in the bush prompted questions from the audience about whether the firm hired young "expat" geologists from the former White Dominions (Canada, South Africa, Australia), whose mining industries have becoming the proving ground for any potential analyst or consulting geologist worth their salt. It is of course the slow turn *away* from these older geographies of resource extraction (Bridge, 2004), and the consequent search for new frontiers (driven in

part by declining ore bodies and increasingly stringent regulations in established mining jurisdictions) that renders staging posts like FINEX so essential to the generation of extractive industry capitalism.

Events like FINEX offer an opportunity for apparently remarkable men (cf. Bear, 2015) to project opportunities for the speculative pursuit of profit, and attempt to enrol others into their own speculative endeavours. Part of this process of projection depends upon generating shorthand images of places and territories through which confidence about the profitability (and stability) of a mine can be generated. These 'strategies of representation' (LiPuma & Lee, 2004, p. 57) create relative rankings of the investment climate (or level of political risk) of territories that might otherwise be competing for the same speculative investments, but these rankings always partake of broader imaginative horizons. For instance, the aforementioned rugby international attempted to induce others' speculative pursuit of profit via *his* own speculative project by dealing with a perceived "branding" issue that has been amplified by well-worn literary tropes:

> Notwithstanding the branding issue of Joseph Conrad writing the *Heart of Darkness*, Congo is a good place. The *Republic* of Congo that is – not the DRC [Democratic Republic of the Congo]. It's the good Congo, they have a new mineral code. The DRC, I'm afraid, is a shithole![4]

Alongside these literary allusions, investors and analysts *do* rely on formal ratings and rankings of investment climates and political risk, which I approach not as calculative devices (nor as narratives generating fictional expectations), but as technologies of the imagination. To investigate these rating and ranking technologies, the imaginative effects they produce, and the opportunities for speculative pursuit of profit that depend upon these imaginative

effects, I turn to another significant industry event, *Mines & Money London*. Here both the deployment of these technologies and the market's anxieties around resource nationalism and the search for new frontiers can be discerned.

Mines & Money London (MML) is open to anyone, provided they can afford it: a two-day pass in 2012 (the full event lasts four and a half days) ran to £1342.50. It is hosted at the Business Design Centre in Islington, adjoined for the convenience of transnational elites on the move to a Hilton hotel. Tables were arranged in the middle of the Centre for 'business to business' meetings between explorers and potential investors, who discussed expected returns, the problem of 'resource nationalism', and the need to look to new, potentially risky, frontiers.[5] The Business Design Centre was originally opened as the Royal Agricultural Hall in 1862, the year of the South Kensington International Exhibition, and designed specifically to emulate the Crystal Palace which hosted the inaugural World's Fair in 1851. The Hall had been built, in part, to bring the rowdy atmosphere of Vauxhall Pleasure Gardens in to an 'established and respectable venue, patronized by the Queen herself' (Toulmin, 2006, p. 132). The parallels between Imperial World's Fairs and the modern extractive industry bazaar do not end with these architectural echoes. For instance, Australia's submissions to both Crystal Palace in 1851 and the 1862 South Kensington Exhibition aimed to present an image of colonial progress and trading opportunities, and to compete with other white dominions for European migrants (Hoffenberg, 2001, p. 141). Meanwhile, at MML 2012, the South Australian Government hosted a stand in the Business Design Centre under the banner 'Mining's Next Frontier,' competing anew for investment, this time with new jurisdictions subject to less onerous regulation.

Not only this, but World's Fairs also ordered exhibits and asked jurors to measure the '"progress" of each colony according to standard scientific criteria and stages' (Hoffenberg,

2001, p. 26). As Tony Bennett puts it, 'the underlying rhetoric of the exposition form is one of progress' (Bennet, 1991, p. 34; Harvey, 1996). The extractive industry bazaar folds the trade fair – where players in globalizing markets come together to learn 'what is new' and generate a 'condition of comparability' (Skov, 2006, p. 769) – into the World's Fair, and the progress of former colonies along a scale of 'stability' and 'investor friendliness' is assessed by the industry professionals in attendance. Around the edge of the business to business meeting tables, stalls belonging to a range of juniors and investment promotion agencies attempted to draw in and guide investment toward speculative prospects located in territories where the levels of "political risk" would not interfere with transforming a mineral deposit into a money mine.

At a stall belonging to an Australia–based, West Africa–focused junior, plastered with drilling results and geological survey maps, I asked how the firm was faring. The surprisingly honest reply was 'not good enough, but we're drilling. Burkina is the biggest place for Australia right now.' And Liberia, I asked, noting the location of some of their other drill sites? The response was as follows:

> Yeah, it's to do with the change to the mining act. It's easier to drill there than in Australia. It can take twelve months [in Australia] because you have to get Native Title. There's none of that here. Liberia is a new country. It needs investment. The administration can be a bit backwards sometimes, but it's a good jurisdiction.

The Native Title Act (1993) was passed in Australia after the Mabo ruling, delivered in 1992, overturned the standing doctrine of *terra nullius*, which stated that there had been no pre-colonial owners of any land in Australia. While Native Title proceedings have been critiqued for forcing indigenous categories of belonging and relatedness to submit to the distortion of

Euro-Australian legal forms in their quest for recognition (Povinelli, 2002), it is also clear that this imperfect move towards greater justice for indigenous Australians has tried the patience of speculative extractive industry investors. As many industry participants were keen to observe, increasing regulation (and 'offtake') in conventional extractive jurisdictions has fuelled a search for new frontiers that, however 'backward', pose less of a threat to the ability to secure future earnings from a mineral deposit (see below on 'Corporate Foreign Policy').

Alongside drilling results and images of "base camp", presentations made by explorers to potential investors almost invariably involved some reference to the Fraser Institute's Policy Potential Index, a 'report card to governments' on the attractiveness of their jurisdiction, compiled by surveying a pool of junior mining executives. To assemble the Policy Potential Index, managers and consultants are asked to rate jurisdictions with which they are familiar in terms of fifteen criteria, including uncertainty over what will be designated protected areas, uncertainty concerning environmental regulations, legal process, political stability and taxation. These issues are rated on a scale from "Encourages exploration investment" to "Would not pursue exploration investment in this region due to this factor" before the ratings are transmuted into hierarchical rankings. In the main hall, in between speeches by influential fund managers (such as the manager of BlackRock's Natural Resource fund, himself the son of one of the City's most respected investors in gold exploration), and celebrity mining investors like Robert Friedland (variously termed an 'environmental devil' or a 'rogue' by some of the City's mining analysts in attendance), juniors were able to pitch to fund managers, jobbing geologists, and the few private investors in the audience. When miners were asked about political risk, it was not uncommon for the Fraser Institute to be invoked yet again - as when one Namibia focused explorer responded to a question about why one would invest in his project given possible political risk in Namibia: 'I will refer you back to

the Fraser Institute. Namibia is between USA and Norway', Norway frequently acting as the "success story" in narratives about otherwise unstable resource-rich states.

Part of a much broader proliferation of indices that rank nations according to their business environment, competitiveness, and apparent levels of corruption and transparency (Gilbert, 2015a), indices like those produced by the Fraser Institute are designed with a disciplinary, pedagogical function in mind, rendering jurisdictional *difference* 'value laden, a shortcoming rather than a viable alternative' (Sauder & Espeland, 2009, p. 73).[6] Reminiscent of the aesthetics of the World's Fair that are replayed in extractive industry bazaars like MML, such rankings locate nations unambiguously within competitive hierarchies. But there is more at stake here than an 'evaluative infrastructure' (Kornberger et al., 2015) centred on rankings, ratings and comparisons. Kornberger et al.'s pragmatic approach to the sociology of valuation, dissolving the problem of a gap between value as it *is* and value as it is *measured*, leads them to argue that 'if we want to understand the value of university education' we should study rankings, ratings and 'other valuation mechanisms that conduct the mundane work of bestowing value upon education' (2015, p. 9). Could the same be argued for valuation mechanisms that bestow potential value on resource-rich territories?

For adherents to this economic sociology, the politics of value becomes a matter of developing new metrics (Stark 2011, p. 327; Hutter and Stark, 2015) or ensuring the 'co-existence of multiple matrices of evaluation' (Lamont, 2012, p. 2). But recasting these rankings as *technologies of the imagination* allows us to ask how they 'afford' (but do not determine) certain imaginative effects, which give form to the speculative pursuit of profit at new extractive frontiers. Political risk ratings and rankings like those produced by the Fraser Institute exceed the mere function of rendering future opportunities calculable, or credible. Instead, they enable speculative investments to take place, suturing anticipatory financial practices in the City of London with extractive operations in distant 'frontiers', while also re-

igniting older geographical imaginaries which render distant territories comparable in terms of the conduct of their inhabitants.

Consider for instance, the following headline on the stall at MML for Bassari Mining, seeking funds for exploration in Senegal: 'Senegal: Successful democracy since 1960; New mining code introduced in 2003; Politically stable – demonstrated with recent 2012 Presidential election.' Or Maya Gold and Silver: 'Why Morocco? Constitutional monarchy with a long history of political stability. Africa's most Europeanized country.' There is nothing merely technical or calculative about this attempt to give meaning to the accident of a geological deposit. It is worth investing in, because it might become a mine, because Morocco's inhabitants might be imagined as reasonable, subdued, stable – even *Europeanized*. James Ferguson (2006, pp. 39–40) has argued that the tendency for oil wealth to flow in and out of Africa through miniscule enclaves, without local socio–spatial connection, can be viewed as the product of a re–animated French colonial distinction between *l'Afrique utile et l'Afrique inutile*; useful and useless Africa. Rankings of the 'investment climate' afforded to resource explorations in certain territories, on the basis of which capital may be speculatively drawn in, appear at certain moments to reflect a recovery of the Belgian colonial category of the *évolué;* the 'evolved' Africans who did not suffer the same weakness of character that their compatriots did, and who were consequently rewarded with greater civic recognition (see Hunt, 1990).

Mining investors are often interested in territories inhabited by putative *évolués,* because these are the territories in which there can be confidence in a future flow of revenue. To imagine a territory as stable, inhabited by a disciplined population, provoked by the use of rating and ranking devices like the Fraser Institute's Policy Potential Index, is to give shape to speculative endeavours in the junior mining industry. Indeed, an entire political risk industry has been built up around transmitting this kind of information, where references to a

stable 'rule of law' are never shorn of their broader imaginative connotations. This issue is addressed in more detail in the section below on 'Corporate Foreign Policy', but first I examine a second technology of the imagination: the discount rate that is folded into otherwise calculative models for determining the Net Present Value of prospective mines. An *interest* rate determines how much you will owe/earn on an initial sum in the future; the *discount* rate is the name given to the same term when it is used instead to determine what a sum owed to you in the future would be worth today. Discounting procedures were used by eighteenth-century colliery viewers in the UK to determine lessors' and lessees' shares of returns (Brackenborough, McLean and Oldroyd, 2001; Pitts, 2001), but discounted cash flow analysis only emerged as a central component of capital allocation decisions (because of its ability to compare present values of future returns on different investments) in the mid-twentieth century (Miller, 1991). Discount rates are also used as indicators of social time preference by policy makers (i.e., as measures of how far members of a society value present or future well-being and levels of inequality), and the ethically charged nature of social discount rate choice, which cannot be derived from any economic principles, has come to the fore particularly in debates around climate change mitigation (Beckerman and Hepburn, 2007; Gollier and Hammitt, 2014). The selection of discount rates in the private sector is often treated as more straightforward, since interest rates on government bonds are often taken as the 'risk-free' rate of return against which returns on possible investments can be assessed. When investments are manifestly not risk-free, however, the discount rate becomes a potent technology of the imagination, folding geographical imaginations into calculations of a project's value and engendering imaginative effects that may (or may not) induce others to invest in a speculative extractive industry project.

Money Mines & the Discount Rate

The ethnographic material presented in this section draws primarily on my participation in a series of 'executive briefings' in 2012–13, and a week–long training course attending during 2014, both run by one of the extractive industries' leading mine valuation consultancies, which I term ExtractCo. I recount the attempts that passionate 'money mining' consultants made to convert fund managers, brokers, geologists, engineers and mining executives to their puritanical vision of capitalism in the age of futurity, where all that matters truly is future flows of revenue – and where ounces and tonnes of ore are merely incidental. What I show in this section is that although a great deal of calculative expertise and computational energy goes into calculating the Net Present Value of a prospective mine, when that mine is located in a putatively risky 'frontier' jurisdiction, such calculative efforts are reliant on the imaginative labour through which discount rates are selected. The determination of these discount rates rests, in turn on the speculative imagination provoked by the ratings and rankings discussed in the previous section. In addition, the ethnographic material drawn from ExtractCo's briefings and training sessions shows clearly the ethically fraught terrain on which speculative projects are played out. There are clear tensions *within* the mining market, between those who would reckon the value of a deposit with reference to 'tonnage' and 'ounces', and those for whom ore deposits are nothing but 'latent cash in the ground.'

A great deal of work goes into transforming a (possible) geological deposit into an investable object (cf. Hägglund, 2000). Indeed, it could be argued that exploration geologists and speculators in the junior mining market pre-empt through their practice the resource materialities critique - or the claim that resources are 'not substances "in nature"' but are instead 'complex arrangements of physical stuff, extractive infrastructures, calculative devices, discourses of…the nation and the corporation' (Richardson & Weszkalnys, 2014, p. 7; see also Limbert & Ferry, 2010; Rogers, 2015; see Bakker and Bridge, 2006 pp. 8-9). Ore

deposit geology textbooks (Edwards & Atkinson, 1986) and mineral economics handbooks (Buchanan, 2016) are explicit about the fact that ore deposits only come to be mined when the requisite *political and economic* components of a resource are in place. As a lawyer specializing in preparing juniors for listing on AIM put it during a masterclass held in parallel to MML 2012:

> A deposit is only a resource if it can come to book. If it's only going to be viable in thirty years [after surface mining or price changes], that's not a resource – it never was and it certainly isn't now. Something in the ground is *not* a resource. It must be economic.[7]

And in *frontier* markets, the ability to control a population matters too. One frontier-focused extractive industry bazaar held in the City of London's Chamber of Commerce shortly after MML was established 'to look out beyond some of the run-of-the-mill locations to the further reaches,' and help juniors prepare for 'the "blowouts" that happen when you cannot get social permission.' For an invited speaker from the International Finance Corporation, preventing such social blowouts is '*even more important than capital in creating a resource*' (emphasis added).[8]

In response to concerns about 'fraudulent' reporting of ore deposits, juniors hoping to list on AIM or attract funding from banks or managed funds must utilize market disclosure codes like the NI 43-101 standard, which breaks down reserves into Resources (from 'Indicated' to 'Measured') and Reserves (from 'Probable' to 'Proven'). In fact, the Canadian (but internationally used) NI 43-101 reporting code was developed *explicitly* in response to the Bre-X 'fraud' that Anna Tsing (2000) makes the centre of her work on 'spectacular accumulation' in the junior mining industry. Tsing's point was precisely that the speculative drama sustaining the Bre-X fraud were *not* significantly different from the non-fraudulent

practices through which junior mining companies exaggerate their findings in order to attract investment required for further exploration or production. Some professionals working in London's mining market - such as the geologist and mineral economist who runs a crash course in mineral economists for incoming directors unfamiliar with the sector, and which I attended in 2013 - did stress the uniquely fraudulent nature of the Bre-X case. Others, like Pete, a chartered geologist whom I met in 2014 while he was delivering a professional development masterclass to mining analysts in the City of London, were more circumspect. Initially, he said, early mineral reporting codes (the predecessors of NI 43-101) did not make much difference. London was 'anti-junior' prior to the establishment of AIM in 1995, and then Bre-X happened:

> We all know about Bre-X, we all talk about Bre-X. But it's worth remembering this is a project where the developer said there were 70 million ounces, with a possible 200 million ounces. And the fact it was *fraud*, you know, not a bad estimate like 40 million or 60 million. The 43-101 was a direct outcome. It doesn't solve Bre-X weirdly enough because it was fraud. So one could still do that.

Pete was sceptical about the *real* effect of the NI 43–101, and the extent to which it could prevent 'fraud' like Bre–X. His analysis echoed those produced by anthropologists studying audit cultures, including Strathern's (2000, p. 314) observation that under regimes of audit, if 'you put your trust in the measures themselves, it is because you cannot put your trust in other outcomes of performance,' and Corsin's (2011, p. 185) notion that 'closing the gap of (assured) information opens yet another gap, that of the quality of the analysis upon which the information is based.' Pete argued that:

> It is no better now, people go through a *process* rather than a thoughtful process. That's just me getting old!...There is still a bit of a

> misconception about what the codes do. Reporting codes, they are *just* reporting codes, not estimation codes. It might be under a code but it doesn't mean it's any good. It doesn't convey any real info about the estimation methodology. It just means we reported *that* according to a code.

Nonetheless, considerable calculative work is required to transform Reserves from 'Probable' to 'Proven'. Greg, a young geologist working for an East Africa-focused junior whom I met at a number of social events for mining analysts in the City (as well as several of the ExtractCo sessions discussed below), explained to me that making a resource ultimately 'comes down to just that figure of ounces and the confidence interval – after looking at literally millions of data points.'[9]

Once the data on ore deposits, price forecasts, taxation regimes and the cost of dealing with the local population (see Gilbert, 2015b) has been assembled, it is possible to calculate the Net Present Value (NPV) of a prospective mine; to evaluate it in terms of future revenue streams that are *always* speculative. It is here that companies like ExtractCo enter the scene, offering investors, analysts and mine planners the use of their Real Options-based valuation models which allow not only for the *valuation* of prospective mines, but the *manipulation* of mine plans in response to predicted changes in mineral prices, or so-called acts of 'resource nationalism': royalty and taxation hikes (Gilbert, 2019b). In 2014, I sat with a group of geologists, engineers, mineral economists, bankers, and environmental and social impact consultants in one of Fleet Street's serviced meeting-room suites, real estate's answer to a globalizing managerial class with limited commitment to place. An ExtractCo executive introduced his firm's approach, his missionary zeal accompanied by repetition of 'easy-to-use recipes for self-conversion' (Coleman, 2003, p. 16):

> It's not a gold mine, it's not a copper mine. It's a money mine. The only reason you go into any business is to make money. I'm a capitalist – so are you. Let's say it out loud – it's not a dirty word. If we can't say 'I'm a capitalist, money has a time value, we want it now' – if you can't say it out loud, it's not gonna happen by accident. It's a mentality first.[10]

By focusing on NPV maximization, the money mining model sets out to 'push back costs' and 'bring cash forward'.[11] Hence, conventional proxy measures used by financial analysts, such as the *quantity* of idle equipment, or the simple *volume* of costs (without regard to the *time* at which they are incurred) must be discarded. An even bigger 'emotional' obstacle to the uptake of the money mining approach is the apparent attachment that geologists have to using all the available rock in a mine. As one of the ExtractCo trainers argued in 2014, 'Sometimes the right thing to do is to *throw away the rock* – don't process low grade material, it's a distraction and a cost. People struggle with this for emotional reasons.'

The message then: untangle your emotional attachment to the ore body, adhere to the philosophy of cash, and recognize that all mines are money mines. Speed up the extractive project, and get the cash out *fast*. It seems, too, that ExtractCo was having some success, and they boasted a high 'conversion' rate:

> Money mining is a term that came to us from a lot of people who did our two-day course. It doesn't matter what it is – precious metals, base metals, bulk metals – it's all latent cash in the ground. It's a money mine, it has a time value so we need to get it out now.[12]

At least a few attendees left converted to the 'philosophy of cash'. However, when I spoke to Tim, a broker I had met at MML, during the following year, he expressed at least some

reservations, explicitly about ExtractCo and their 'money mining' approach. Referring to a West African gold project in which his brokerage firm had been involved, he explained how ExtractCo brought about the mine's downfall:

> The broker says there's better value if you extract one million ounces, the engineer says you can for one year, then he raped the resource and said, I don't care, I 'brought the cost forward', and got 920,000 ounces, and the CEO resigned. They got their million ounces and then they were ruined. They had to get a new CEO and have a merger.[13]

Nonetheless, when I had asked earlier in our meeting what Tim did at his brokerage, his response was unequivocal: 'we're trying to sell money. Net present value is what it all comes down to. Not necessarily in practice, but for investors, that's what they're trying to see. A high net present value.'

NPV most certainly did matter to Tim and his clients, as it did to ExtractCo. Following Jonathan Nitzan and Shimshon Bichler (2009), NPV can be understood as a quantification of how capitalists expect their power to unfold: if a mineral asset is valued in terms of an expected set of discounted cash flows, and it returns a positive NPV, then this may reflect a confidence on the part of analysts, investors or miners that their earnings will materialize. But if a territory is thought to be prone to 'resource nationalism' or otherwise 'politically risky', investors' confidence in receiving those future earnings from the 'money mines' will quite literally be discounted. Hence, the selection of the discount rate constitutes the moment at which assessments of 'political risk', and speculative images of the prospective frontier territories, are folded into the ritual of capitalization.

Thus, Tim explained, planning a project in a particular jurisdiction can require that the NPV of a company be discounted by 8–10%. Of course, if it is

> a first world country with a very good mining code, it can be 5%. Hardly any are like that now. That's the whole subjective part of building a financial model. It's a bit of a thumbsuck.[14]

Likewise, at ExtractCo's 2014 training seminar, the executive providing the training lamented the *subjectivity* implied by choosing a discount rate:

> A lot of science goes into the project and we just end up using an estimate for the key number in the project. All this science – millions of dollars by the way, not just science – and then we turn around, look at this number, and decide whether to spend a billion dollars. It's not a problem if you want to fine tune a project in Canada, but if you want to choose between Canada and the Congo you have a problem.[15]

The ExtractCo evangelist, like Tim the broker, was clearly uncomfortable with the extent to which his calculations of net present value, originally vaunted for an ability to rescue executives from relying on 'intuition and authority' (Dean, 1954, p. 129), was determined, ultimately, by an intuitive and 'subjective' factor.

But it would be a mistake to dismiss the selection of the discount rate as merely another instance in which quantitative calculation and qualitative judgement are collapsed (Callon & Law, 2005), or evidence of the fact that modellers often 'require the qualitative to make sense of the quantitative and to be able to communicate their solutions to others' (Pryke, 2010, p. 430; Beckert, 2016). Instead, the discount rate ought to be understood as a *technology of the imagination*, one that is particularly good at prompting analysts, investors and miners to conjure up images of relative opportunity in the 'first world', Canada or the Congo [sic]. It not only renders speculative acts subject to ethical scrutiny (consider, for instance, Tim's assessment of the West African gold project 'raped' by an executive), but calls upon

speculators to make ethically-laden claims and assessments about frontier mining jurisdictions and their populations. In part, as argued above, efforts to 'discount' given jurisdictions are provoked by another technology of the imagination, that provided by 'report cards to government' produced by organizations like the Fraser Institute. But there is an imaginative excess in this speculative economy, through which mining professionals affix 'specific and different sets of summary images to each locality' under discussion, in an effort to capture the risk (putatively) inherent in its politics (LiPuma & Lee, 2004, pp. 57-58; Koelble & LiPuma, 2006, p. 607). In the next section, which analyses approaches to Corporate Foreign Policy in the mining market, I show how this broader imaginative capacity depends upon a particular historiography, according to which postcolonial inequities in international investment law to be recast as mere by-products of uneven implementation of the 'rule of law' (itself perceived as a product of differential moral capacity).

Corporate Foreign Policy: Resource Nationalism & the Rule of Law

During my fieldwork in London's market for mining finance, few briefings, investor presentations or matchmaking sessions proceeded without mention of political risk in general, or 'creeping expropriation' and resource nationalism as the most salient political risks of the moment. In their survey of mining executives and investors' concerns for 2012-2013, Ernst & Young (2012, 7-14) identified 'resource nationalism' as a key political risk facing mining and metals exploration firms. Their conception of resource nationalism was expansive, incorporating moratoria on investment licenses (Mongolia), plans to tax coal based on market prices rather than volume (China), enforcement of higher royalty payments by an anti-corruption commission (Indonesia), as well as moves to legalize nationalization of mineral assets (South Africa) (see Ernst & Young 2014). This all-encompassing approach to classifying non-beneficial regulatory acts as resource nationalism was shared by many

analysts in the City of London, as well as by international investment lawyers providing advisory services to exploration firms (see also Joffé et al., 2009, pp. 8-9).

At political risk industry events hosted in Mayfair hotels and looking ahead to the risks that 2013 might pose, attendance from miners was high, and extractive industry resource nationalism was high on the agenda. As one representative from a boutique political risk firm put it, ‘In the past, political risk has been defined by, you know, which way the flag goes’ but now there was a need to get a ‘real handle on investment climates over time. And the new key risk we are seeing is the risk of *contract review*.’ [16] The risk of contract review was often used by mining analysts interchangeably with ‘resource nationalism’, and lawyers advising the mining community began to promote the idea of ‘corporate foreign policy’, offered as a replacement term for corporate social responsibility ‘rendered meaningless by the insincere rhetoric of the public relations industry’ (Amsterdam, n.d.; see Gilbert, 2015b). For one lawyer specializing in international investment law as applied to the extractive industries, this meant ‘weaponizing’ corporate social responsibility, recognizing that ‘buy-in from the local community is your first line of support against less significant political clowns,’ especially in ‘kleptocratic’, resource-rich African states.[17] To recall the words of the IFC representative speaking at a frontier mining event and quoted above, corporate social responsibility is here imagined as a device for preventing ‘social blowouts’ and thus transforming a deposit into a *resource.* For international lawyer Robert Amsterdam, resource nationalism was also expansive - it could begin with excessively stringent environmental legislation, and even turn up in unexpected, apparently ‘pro-Western’ jurisdictions:

> We know about black empowerment in South Africa, indigenization in Zimbabwe. Even Ghana, that we'd always thought of as very pro-Western, very stable, but now we have resource nationalism...Do not

> feel that resource nationalism and the threat of expropriation is something you can immediately recognize[18]

There are clear parallels here to the equation of profitability, stability and territories inhabited by 'Europeanized' subjects or *evolués* on display at MML, and nourished by technologies of the imagination like the Fraser Institute's index. The question is thus not *whether* to have a corporate foreign policy, but what form that policy to take. Amsterdam points explicitly to the risk of 'resource nationalism' in new 'frontier markets' as a driver of the need for corporate foreign policies that incorporate 'the full tool box of legal responses from arbitration to local criminal law to international treaties' (Amsterdam, 2012, unpaged).

Amsterdam spoke at Global Mining Frontiers 2013, an extractive industry bazaar hosted in the City of London's Chamber of Commerce, on a much smaller scale to MML, but organized according to a similar plan. He framed his speech in terms of the apparent rising tide of resource nationalism, beginning with the statement that 'in most countries where there are resources the law is weak and not very well enforced.' Being a good corporate citizen goes without saying, but how could you deal with the 'aggressive renegotiation of deals' by countries who worked 'in an aggressive way, attacking miners' interests'? The first step, he suggested, was to 'level the playing field' by insuring you were covered by a Bilateral Investment Treaty that provided for *independent*, *out-of-country* arbitration. Amsterdam framed specific risks engendered by the rise of resource nationalism (the 'aggressive renegotiation of deals', 'overly harsh environmental checks'). A number of international lawyers and political risk analysts share this emphasis on Bilateral Investment Treaties as the first line of defence against the political risks of resource nationalism (Comeaux and Kinsella, 1994, pp. 7-12; Hill, 1998, pp. 293-94; Moran, 1998, pp. 9-14).

The reading offered by many legal theorists and mineral economists appears perfectly straightforward as a response to real risks to profitability and concerns about the 'rule of

law': capital exporting states in the Global North require that their investments in the extractive industries - whose value after all is inherently speculative, forward-looking or based on future potential - be protected. In this view, the best way to provide that protection is through a Bilateral Investment Treaty that allows investors domiciled in one party to the treaty, but operating in the territory of the other, to trigger an arbitration clause (or vice versa). The result of triggering such a clause would be arbitration between an investor and a host state taking place in the World Bank's International Court for the Settlement of Investment Disputes (or occasionally under the International Chamber of Commerce rules). Hence the recent renegotiation of a series of South Africa's Bilateral Investment Treaties (partly in response to concerns that domestic policy agendas like Black Economic Empowerment could be treated as 'discrimination' against foreign corporations) has alarmed some investment lawyers, fearful that it will undermine attempts to attract future foreign investment (Schlemmer, 2016).

My argument here is not that there are no "real" risks to extractive industry endeavours from the kinds of regulatory actions that mining analysts have come to gather together as "resource nationalism." Rather, I wish to make the point that the *very ability to imagine certain risks as 'resource nationalism'*, and the ability to trigger acts of speculation with reference to those risks (encoded in rankings like those produced by the Fraser Institute, or folded into valuations via the selection of a discount rate), rests on a contingent history of international investment law that is by no means uncontested. The technologies of the imagination (political risk rankings; discount rates) that impel speculative action and allow financial practices in the City of London to transform distant landscapes by allocating capital to extractive endeavours are themselves rendered plausible by this particular perspective on international investment law and political risk. Industry and academic perspectives have come to conceive of political risk rather narrowly, in terms of the 'risk that the laws of a

country will unexpectedly change to the investor's detriment after the investor has invested capital in the country…Put simply, political risk is the risk of government intervention' (Comeaux & Kinsella, 1994, p. 1). Just as juniors seeking investment at MML sought to present their prospects as located in 'Europeanized' territories, pro-industry investment lawyers feed on a troubling geographical imagination:

> Among investors' greatest fears may be the ascension to power of a figure like former Emperor Bokassa of the Central African Republic… He was deposed and later tried for cannibalism…Might another comparable person succeed in taking over another country? It may not be likely; however, investors may not feel comfortable concluding that it is too remote to warrant concern. (Hill, 1998, pp. 296-297; compare Weston 1975-1976, p. 111)

Read alongside assertions that political risk is 'negligible' in developed markets (Hill 1998, p. 298) or 'Western liberal democracies' (Comeaux & Kinsella, 1994, p. 24), these definitions of political risk reveal that more is at stake than can be captured in any quantitative risk 'metrics'. The political risk analysis industry, and the techniques of private international law which it informs, are haunted by images of disordered postcolonial subjects, fixed in place within jurisdictions that can be ranked by their compliance with legal regimes which do not threaten the speculative pursuit of profit as carried out by mining juniors seeking out extractive industry frontiers.

International lawyers critical of the current international arbitration system have drawn particular attention to the gradual expansion of the notion of "regulatory takings" (Simmons, 2012) and the increasing protection provided to foreign investors' "legitimate expectations" (Kantor, 2015; Potesta, 2013). There has been, over the last thirty years, a shift towards

seeing more and more public-interest regulatory decisions as acts of regulatory expropriation or violation of investors' legitimate expectations. And of course, speculative acts incited by technologies of the imagination such as political risk rankings and discounted cash flow models rely ultimately on a sense that speculators possess ethically justified, *legitimate* expectations. Indeed, at a training course run by one of the UK's quasi-governmental export promotion agencies (focusing on those working in engineering, extractive industries and infrastructure investments overseas), reinforcing the sense that non-interference by host governments was *legitimate* took centre stage.

In early 2015, I attended a training session on Bilateral Investment Treaties run by an international investment lawyer from a 'Magic Circle' law firm based in the City of London. The lawyer's stated task was to explain how to assure that British investors would be 'safe' in those countries where it is 'dangerous' to invest money, but much of the session was given over to how Bilateral Investment Treaties could be used in 'creative' ways. Companies could be structured to ensure that they are covered by as many treaties as possible, even establishing subsidiary mailbox companies abroad in order to do business in the UK, as a *de facto* UK company, while being protected from any changes to regulation or tax structures that might constitute 'creeping expropriation.' This prompted some concern from the audience:

> Surely countries *can* change their tax laws, as a company you're supposed to take that risk. I don't think any country says 'this is forever'?[19]

The City lawyer running the session responded:

> Think about the purpose of these Bilateral Investment Treaties, it is to promote that foreign investment, and for foreign investment, you need

> stability. Many investments are not going to be profitable in a year or two, so if the law changes, profitability goes down.

Another audience member asked whether by signing BITs, the government is not 'giving up a degree of control,' but the trainer's response was that 'the issue is *developing* countries, where these things can change more frequently.'

Towards the end of the session, once the attendees had accepted the City lawyer's normative parameters, she deployed *Saipem v. Bangladesh* as a case from which the attendees could learn. The Saipem case involved the construction of a gas pipeline in Bangladesh (a prospective extractive industry 'frontier') which was halted due to local opposition. Seeking payment after their attempts at speculative pursuit of profit came unstuck, Saipem triggered an arbitration clause in the Bilateral Investment Treaty between Bangladesh and their home nation (Italy), but the award was set aside by the Bangladeshi courts after a set of procedural requests made by the Bangladesh government were denied. This led to an ICSID arbitration in which the *set aside award itself* was seen as an 'expropriated' investment. Saipem was used as a precedent that would be, as the trainer put it, 'quite useful for you, because it is a situation considered an indirect expropriation, but you would never have considered it an expropriation.' This, she argued, was a 'counter-intuitive situation that can prove very useful. Locally that annulment was considered valid, but you have to look at it from an international view, and the tribunal viewed it as grossly illegal.'

While this may be true, the legality of such tribunals themselves is disputed even by relatively conservative international lawyers: they lack appellate mechanisms, do not require the citation of precedents, and there is nothing preventing lawyers from moving between roles as members of a tribunal and representatives of parties (Schultz, 2015; also van Haarten, 2017; on Saipem specifically see Goldhaber, 2013, p. 389). An alternative critique, advanced

in particular by Muthucumuraswamy Sornarajah (2003, 2012, 2016) and Anthony Anghie (2007, 2009), argues that the protection of 'legitimate expectations' and the 'freedom to contract' - even when this means disregarding the sovereignty of national courts and the right to legislate in the public interest - simply reflects the continuation of imperial standards of international law. A longstanding tendency to treat state sovereignty as *conditional*, subject to the right of transnational (typically Euro-American) corporations to enter into speculative commercial contracts, is in Anghie's terms, redolent of nineteenth century practices whereby 'one set of laws was applicable between civilized states but that another set of practices was justified in relation to uncivilized states' (Anghie, 2009, p. 293). Indeed, while tracing out my field-site through multi-sited ethnography, I interviewed a group of International Finance Corporation-backed arbitration lawyers while they were in Dhaka to increase domestic 'arbitration capacity' in the wake of Saipem. They worked for an NGO spun off from George Washington University that was, in the words of one these trainers, set up to 'spread the rule of law, in a very American way I guess.'[20] The trainer argued that while it was true that arbitration capacity was likely to appeal to foreign investors, since arbitration 'has an international aspect in its DNA,' the establishment of Bangladesh's International Arbitration Centre (BIAC) was unlikely to be effective, because 'the oil and gas companies want a panel that is not all composed of Bangladeshis. So, if you look at the BIAC board now, I don't think the oil and gas companies will use it.'

Technologies of the imagination like the Fraser Institute's rankings and discounted cash flow analyses provoke, but do not determine, geographical imaginations which give meaning to stable Europeanized states; "resource nationalism" even in "pro-Western" jurisdictions; careful distinctions between Heart of Darkness 'shitholes' and resourceful frontiers; or the need for corporate foreign policy to defend against political clowns in kleptocratic states. A particular approach to international investment law, which naturalizes the idea that 'political

risks' are simply empirical impediments to the transnational corporation's right to contract under a set of legitimate expectations (including a freedom from "regulatory expropriation" and acts of "resource nationalism", broadly defined) provides the backdrop against which the technologies of the imagination discussed above animate the speculative search for new extractive industry frontiers. Without the guarantees provided by a system of international investment law that distinguishes between "civilized" (Europeanized, stable, pro-Western) and "uncivilized" jurisdictions, and offers an escape from the sovereign authority of the 'uncivilized' if the speculative pursuit of profit is threatened, it would not be possible to leverage others' speculative ambitions via reference to the Fraser Institute's rankings, or provide a justification for the selection of a particular discount rate that might help distinguish between, for instance, "Canada and the Congo"

Conclusion: Anthropology, Finance & Critique

In this article, I have sought to contribute to an emerging "anthropology of speculation" by attending to the technologies of the imagination through which speculative activity and the suturing of financial routines in the City of London with distant financial frontiers is made possible. As political economists such as Palan (2013; 2015) and Konings (2015) have acknowledged, it makes little sense to ground a *critique* of speculation in the generation of fictitious or putative value that can be calculated as the gap between "book value" and market capitalization (cf. Davis, 2017). To the extent that *any* capitalist endeavour is structured as a going concern, valued for its capacity to produce earnings in the future, it must be considered a speculative enterprise. For economic sociologists like Beckert (2015, 2016), this means that the calculative devices which have received so much attention in the social studies of finance do not so much calculate, as nourish *credible narratives and expectations* about the future: it is these that give assets their value and coordinate economic action. But the anthropological approach adopted here departs from an emphasis on credible narratives and the coordination

of economic activity via effective communication. Instead, I focus on the capacity of particular technologies (which might otherwise be termed "calculative devices") to provoke an excess of meaning that may be used to guide, draw in, and allocate capital to speculative projects in the junior mining sector.

To treat these devices (political risk rankings, discount rates calculations) as technologies of the imagination offers a way in to a more refined ethnography of finance than offered by broad references to a *single* contemporary speculative 'imaginary' (cf. Appadurai, 2011; Pryke & Allen, 2000). Equally, it enables a move beyond the 'exaggerated fascination with the technicalities of practitioner knowledge' and the side-lining of imagination that Actor Network Theory has bequeathed to the sociology of finance (Konings 2018a, p. 43). By approaching speculation as a matter not of guessing at the true value of an investment, but a mode of economic activity which depends upon enrolling others in your speculative pursuit of profit (and leveraging their speculative ambitions for your own purposes), the anthropology of speculation offers a way to understand speculation as generative, imaginative and under-determined in its effects.

I have focused on two specific technologies of the imagination, and their ability to provoke images of territories as either stable, Europeanized, and pro-Western - or as unstable and prone to "resource nationalism." Crucially, as I argued in the final section above, the capacity that these technologies have to provoke the imagination, and set in to motion speculative projects that knit together the City of London, the Alternative Investment Market, and distant extractive industry frontiers, must be understood in relation to the organization of post-imperial international investment law. This legal "system," which maintains a distinction between civilized states and uncivilized jurisdictions where the domestic courts may be justifiably circumvented, underpins the Corporate Foreign Policy strategies which junior mining companies are advised to adopt my lawyers operating in the City of London.

The anthropology of speculation outlined here also departs from a tendency in the sociology and anthropology of finance to reject critical engagements with the practices documented through one's interviews and ethnography (Holmes & Marcus 2008; MacKenzie, 2005). It has become relatively commonplace for anthropologists of finance to emphasize the extent to which their subjects "sometimes invoke the same concepts and analytical apparatus as anthropologists do" (Maurer, 2005, p. 190) or argue that "anthropology and finance can be seen as parallel forms of knowledge" (Miyazaki, 2013, p. 43; also Riles, 2013). I have not shied away from parallels between anthropological forms of analysis and the approaches taken by my interlocutors where they are present - as for instance, in the parallels between anthropological writings on "resource materialities" and the sensibilities of economic geologists. But we might equally note that the images deployed by extractive industry speculators - of life in "the bush", Hearts of Darkness, and more-or-less Europeanized nations - having been routinely deployed in early anthropological writings, have now been (at least partially) exorcised from disciplinary convention through robust critique. Anthropological analysts may find parallels in the practice of financiers and geologists operating in the junior mining industry, but also in the critiques launched by organized like RAID and Global Witness. The "real world of finance", to borrow a phrase from one anonymous reviewer, is constituted just as much by the calculation of Net Present Value as it is by speculation at extractive industry frontiers - and even "asset laundering" on London's Alternative Investment Market.

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Biographical Note

See Article detail sheet

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[1] Around 1400 of the 2340 companies listed on TSX-V are mining juniors, while there are 125 mining companies listed on AIM, out of a total of 1066 (at the time of writing). See Deneault & Sacher (2010) for a critical account of how Canada became the 'legal haven of choice' for the extractive industries, and Coulson (2012) for an industrial history of the mining industry (and of professional mining analysts and investors) in London.

[2] The Nomad system was, in fact, only put in place after concerns about the effective absence of regulation were raised by the British Venture Capital Association. In July 2017 AIM launched a review of their rules, including those pertaining to the role of the Nomad. A proposed list of factors to be taken into account by Nomads includes the 'good character' of investors, and 'Formal criticism of the applicant and/or any of its directors by other regulators, governments, courts, law enforcement or exchange bodies.'

[3] For example, consider Gerard Holden, former head of natural resource investment at Barclay's, and head of the AIM-listed, Bangladesh-focused prospective coal mining company GCM Resources Plc until 2013. Holden's earlier position as CEO and Chairman of the controversial Democratic Republic of Congo-focused, AIM-listed Brinkley Resources was highlighted in a report by the London Mining Network (2012), that put forward a case for stronger regulatory oversight on AIM. But Holden had ceased his involvement in Brinkley (now de-listed) by the time the report was written, and moved on to GCM. His is by no means a rare career path among the directors of AIM-listed juniors.

[4] Fieldnotes, November 2012. In the process he confused precisely which Congo was the subject of Conrad's writing.

[5] Similar 'matchmaking' or 'frontier mining speed-dating' sessions were held for investors, consulting geologists, explorers, and analysts at other events held throughout the year in the City of London's Livery Company Halls and Chamber of Commerce.

[6] Managers and consultants are asked to rate jurisdictions with which they are familiar in terms of fifteen criteria, including uncertainty over what will be designated protected areas, uncertainty concerning environmental regulations, legal process, political stability and taxation, on a scale from "Encourages exploration investment" to "Would not pursue exploration investment in this region due to this factor."

[7] Fieldnotes, December 2012.

[8] Fieldnotes, November 2012.

[9] Fieldnotes, December 2012.

[10] Fieldnotes, March 2014.

[11] Fieldnotes, March 2013.

[12] Fieldnotes, March 2013.

[13] Fieldnotes, April 2013.

[14] Fieldnotes, April 2013.

[15] Fieldnotes, March 2014.

[16] Fieldnotes, December 2012.

[17] Fieldnotes, March 2013

[18] Speaking at a frontier-focused mining investment forum in spring 2013.

[19] Fieldnotes, February 2014.

[20] Fieldnotes, October 2013.