

Organising Destruction: A Derivative Logic?

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Abstract

In this paper we attempt to better understand war's preponderance by exploring its relation to something we commonly see as ever present: the economy and the institutions of finance through which it is enacted. We delineate histories of warfare and finance, rendering our present as one of 'war amongst the people' (Smith, 2006) in which finance is exemplified by the logic of the derivative (Martin, 2007). Through detailed examination of an infamous comment by Donald Rumsfeld, then US Secretary of Defense, and the US Defense Department's short lived Policy Analysis Market, we explore the management of knowledge enabled by the derivative as emblematic of our times in both military and financial circles, and draw upon the work of Randy Martin (2007, 2015) to suggest that this logic is increasingly imperial in its reach and ubiquitous in its effects, becoming in the process the key organisational technology of our times. At the core of the functioning of the derivative we contend, in all of the domains in which we witness it at work, is an essential *indifference* to the underlying circumstances from which it purportedly derives, leaving us in a world in which we endlessly manage risks to our future security but at the cost of the loss of genuinely open futures worthy of our interest.

Keywords: derivative, destruction, war, finance

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I've got to be honest with you. When the September 11th situation happened, I didn't know that the, and I must say, and I want to say this because it's, I don't want to take it lightly, it's not a light situation. It's a devastating act. It was really a bad thing, it's one of the worse things I've seen in my lifetime, you know. But, I will tell you and every trader will tell you who was not in that building, and who was buying gold and who owned gold and silver, that when it happened, the first thing you thought about was well how much is gold up? The first thing that came to mind was my God gold must be exploding! Fortunately for us all our clients were in gold. So when it went up they all doubled their money. everybody doubled their money. It was a blessing in disguise. Devastating, crushing, heart shattering, but on the financial sense for my clients that were in the market they all made money. Now, I wasn't looking for this type of help—but it happened. When the US bombed Iraq back in 1991 the price of oil went from \$13 to \$40 a barrel for Christ sake! Now we couldn't wait for the bombs to start raining down on Saddam Hussein. We were all excited. We wanted Saddam to really create problems. Do whatever you have to do, set fire to some more oil wells, because the price is going to go higher. Every broker was chanting that, there was not a broker that I know of that wasn't excited about that. This was a disaster this was something that was you know catastrophe happening. Bombing, wars. In devastation there is opportunity.¹

Introduction

As our opening quote makes brutally clear, connections between wealth and war remain very much alive in the present, suggesting that any account of the technologies of organised destruction in the twenty-first century will need to pay due diligence to the role of finance in this imbroglio. In an attempt to reflect upon his years of military service and make some sense of the changing role of organised destruction in the world, Rupert Smith (2006), takes a step back from surveying only those encounters that follow formal declarations of hostility to consider more broadly the shifting 'utility of force'. By use of the phrase the 'utility of force' Smith intends to sharpen focus on those situations in which force is not only used but used effectively, with due cognisance of both its nature and the nature of the context in which it is to be deployed. As Gow (2006: 1161) puts it in his assessment of the importance of Smith's contribution, attending to the utility of force entails attending to 'how to use armed force to achieve a desired and stable political outcome'. Indeed Gow concludes 'There is no book – or study of any other kind – to match this. And, perhaps, there might not be for another 173 years or so' (2006: 1170).²

From this vantage point Smith provocatively declares that 'War no longer exists' (2006: 1). In this Smith argues that what we have previously thought of as being war – 'battle in a field between men and machinery' (1) – has been superseded by forms of and theatres of violence which he characterises in the following terms:

[S]trategic confrontation between a range of combatants, not all of which are armies, and using different types of weapons, often improvised. (Smith, 2006: 3)

¹ Carlton Brown, Commodities Trader, interview in *The Corporation*; quote begins at 52 minutes, 32 seconds, text at http://www.thecorporation.com/sites/default/files/resource-field_media/Transcript_finalpt1%20copy.pdf, last consulted 26th February 2016.

² Gow's (2006:1170) mention of 173 years in his praise of Smith's text makes explicit the comparison between *The Utility of Force* and Clausewitz's *On War*, a comparison with which many commentators seem to agree.

War Amongst the People

Just as the world wars of the twentieth century exemplify for Smith the constituents of the paradigm of industrial, interstate war, it is from his experience as Deputy Supreme Allied Commander Europe, overseeing operations in Kosovo, that he draws out exemplification of the paradigm of the use and utility of force in which we currently find ourselves: that of 'war amongst the people'. He characterises the new circumstances in the following terms:

On the ground... it will be a national soldier representing a non-state coalition or organization, fighting a formless or non-state opponent... The absence of a formulated enemy is a main reason for the unlikelihood of conducting interstate industrial war, and is therefore a strong underpinning element of a new paradigm of war. (Smith, 2006: 305).

In Smith's threefold conceptualisation of recent military history we travel from an ancien regime, caricatured by battles taking place in season, in theatre, and in garish uniform, with 'normal' life continuing between seasons; to an industrial regime within which states mobilise in their entirety until one side or other is comprehensively defeated, and then things return to 'normal'. The current set-up which Smith attempts to capture with the notion of 'war amongst the people' is one in which opponents appear, where they appear at all, more amorphously; and an attitude of perpetual vigilance is required. However this vigilance is less about seeking an opportunity for a *coup de grace* and more one of continually pre-empting and containing ubiquitous threat. Perhaps the most vivid example with which we are still living is the so-called 'war on terror'.

For Smith not only are the means and context of deployment of force radically altered in the shift in paradigm, there is also transformation afoot in relation to the ends to which force can and will be devoted. These have moved 'from the hard objectives that decide a political outcome to those of establishing conditions in which the outcome may be decided' (2006: 269). Of course, Smith is not alone in making a variant of this distinction. Other similar moves are highlighted by commentators such as Toffler and Toffler (1993) and Martin (2015). What Smith and others are alluding to here is that the clear goals of industrial war, such as, for instance, "the defeat of the Ottoman Empire," find little or no place in the emerging war amongst the people. To take but one of the examples closest to him, for Smith the peacekeeping forces in the Balkans conflicts did not set out to defeat a clearly identifiable enemy but rather to provide circumstances in which humanitarian aid could be delivered to those who had suffered as a result of the conflict taking place around them. Such a step reminds us of the persistence of the utility of force, despite shifting paradigms in which it can be expressed. For Smith, the utility of force lies precisely in its capacity to support the twin aims of defence and security. In contemporary circumstances, those discrete military actions that constitute the core of defence form an ever decreasing part of a broader security agenda, being buttressed with individual and collective diplomatic efforts of varying levels of formal organisation and intensified efforts to anticipate where vulnerabilities might lie and how and when they might be exploited by a range of potential assailants. These vulnerabilities extend beyond exposure to invasion or on a recognised battlefield to include those associated with disparate resources and infrastructure, including safe public space. And the 'weapons' utilised to both attack and secure these resources extend to include information and communication technologies and economic powers of various sorts, including their intersections in intellectual property. In the next section we further explore the myriad relationships that are formed between matters martial, economic and financial. For war and wealth have always been intimately interlinked.

War and Finance

An Act for granting to their Majesties several Rates and Duties upon Tunnage of Ships and Vessels, and upon Beer, Ale, and other Liquors, for securing certain Recompences and Advantages in the said Act mentioned, to such Persons as shall voluntarily advance the Sum of Fifteen hundred thousand Pounds towards carrying on the War against France.³

The paragraph above introduces the text that brings about the formal inauguration of the Old Lady of Threadneedle Street: The Bank of England. This innovation depended not only upon an ongoing desire for funds to carry out war with France on the part of the Crown but also a moment in which the older stable bases of value were increasingly seen to be exhausted in their capacity for tax yield, with the new wealth of trade yet to be effectively fully captured for such harvesting. Elsewhere (Kavanagh et al, 2014) we have considered the evolution of financial practices, particularly market-derived financial practices, from medieval period to the present. There we contend that the major tenets of finance were established by the eighteenth century and shifts in focus since are not so much innovations as phases in which particularly elements of the set up are 'intensified', in the sense in which Simondon uses the term. Our use of the notion of intensification here is in sympathy with the ways in which Simondon's legacy appears in Foucault's take on the different forms of power he explicates, which rise and fall in particular significance at particular times but which are all present in all of their potential from the moment birth of the novelties that bring them into being.

We place the first intensification in finance with the emergence of the joint stock company and the associated demand for enhancements to accounting systems to report progress to those holding such stock. The second emerges in the latter part of the nineteenth century as more complex organisations such as railroads, metalworking and chemical industries demanded reliable cost data to determine prices, assess results and evaluate investments as they sought to direct limited finance to the areas of the business where it would appear to be able to do most good. This management accounting joins the earlier financial accounting as part of the apparatus of increasingly financialised capitalism and both are still vital to pretty much all organisations in our current circumstances. But they have been joined and in some ways eclipsed by the third intensification in which we still find ourselves, that of the age of the derivative. Emerging from a revolution in finance theory and practice that really starts to turn in the 1960s (despite many elements having been present for much longer), this change witnesses an unprecedented and prodigious growth in available financial instruments, including options, swaps, futures and other derivatives; a concomitant influx of mathematical expertise with which to make and move these exotic instruments; growth in the use of electronic computation and communication to keep track of it all; and the increasing emergence of electronic trading platforms that will eventually find themselves host to algorithms able to govern the majority of trade (in commodities, money and their endlessly ramifying derivative forms) without direct human intervention.

The major theoretical innovations required for this set of changes to take place are the twin tales of Eugene Fama's 'Efficient Market Hypothesis';⁴ and the mechanism that would apparently allow one to securely price an instrument derived from an underlying, tradable asset: the Black-Scholes equation. Material moments in this turn include the emergence of petro- and euro-dollars (effectively world currencies without a direct line to an issuing nation-state). We also have the (consequent)

³ BANK OF ENGLAND ACT 1694 (5 & 6 Will. & Mar. c. 20), available at <http://www.bankofengland.co.uk/about/Documents/legislation/1694act.pdf>, last consulted, 24th February 2016, cited in Hamilton and Parker, 2015: 47.

⁴ The Efficient Market Hypothesis asserts that markets are the best technology we have for ascertaining price. Since price apparently reflects all available information, the market in which that price is registered is, following Hayek, seen to be the best possible aggregator of information.

demise of the Bretton Woods agreement⁵ and an 'offshore' apparatus⁶ in which the petro and euro-dollars could reside and accumulate before overwhelming the prior ordering that allowed them to emerge (see, for example, *inter alia*, Rotman, 1987; Martin, 2015; and, tele-visually, Curtis, 2015). Whilst the relationship between war and wealth persists, as mechanisms for obtaining, securing and obscuring wealth change, we would expect to see sympathetic changes in the mode of organisation of destruction.

Derivative Logic and Military Options

Randy Martin offers a take on the evolution of financial practices and their consequences that is sympathetic to the periodization of intensifications that we explored above. And his purview is far from restricted to financial matters, for Martin's thesis is that the derivative is more and more a core mode of organizing across a multitude of social practices. Examples that Martin (2007; 2015) works in some detail include the prosecution of war; the maintenance of security within and between wars; the enactment of forms of democracy and civil society and their relation to knowledge management; the counterculture of skateboarding; and the evolution of contemporary dance. What Martin offers is a radical rethinking of admirable breadth via an examination of the contemporaneous emergence and dispersion of a mode or logic of organisation across a diverse range of fields. In so doing he illuminates the derivative, bringing it out of the shadows of the arcanery and chicanery of high finance to reveal the ways in which the peculiar relations of knowledge and time that it mobilises are increasingly ubiquitous in our social lives. Our bet is that there is enough similarity in Smith's key conceptualisations of epochal shifts to those discerned by Martin around the logic of the derivative and its deployment that we may learn more about both by bringing them together. Neither contributor is alone in their fascination with this emergent logic and we find other examples in a range of work across politics, international relations, security studies and geography (see, for example, Adey and Anderson, 2012; Anderson, 2010; Amoore, 2011; Aradu and van Munster, 2007; de Goede, 2005).

Martin notes the ways in which increasingly financial (or financialised) capitalism (Hilferding, 1910/1981) began to shift – approximately forty years ago – into a new phase with new policy priorities associated with it.

Financialization, the process by which perquisites of finance increasingly come to orient the expansion of wealth and the metrics of daily life, entails a shift in policy emphasis from providing security to managing risk (Martin, 2015: 55)

As we hinted, this shift also mirrors that which Smith identifies between industrial war and war amongst the people. Indeed, for Martin in these shifts the very notion of 'economy' – that is the industrial economy of production for demand within and to sustain a secure a state's life – is eclipsed. With the breakdown of what became known as the Fordist consensus, stratified states no longer seek to rise and fall in relation to each other's fortunes, taking all their citizens up or down with them. Rather the state fragments and each fragment, each individualised neoliberal subject, becomes responsible for the management of his, or her, own risks to (financial) security. Or rather to complexify this a little further and increase its verisimilitude, we should note that populations so fragmented are also immediately parsed into two sets. First, there are those who are relatively secure and seek to manage and exploit the 'risk' they find in the world for profit. And very much second are those deemed to be wanting in regard to the capacity for self-management, and who are thus seen as members of various 'at risk' populations. Populations that when viewed from the perspective of the other category of fragments render themselves as in need of recuperative intervention through a

⁵ In which exchange rates were effectively managed within a shared framework of negotiated monetary order, with the US dollar as default world currency.

⁶ Made up of curious spaces, magically both inside and outside of the boundaries of existing nation-states and their powers.

curious contemporary perversion of paternalism. Here we can see how abutting Smith with Martin can render the former's insights with regard to the mobilisation of force in situations of war as also illuminating in relation to more pedestrian 'security' concerns in the absence of formally declared war. As a number of commentators, many drawing on the later Foucault have noted, a ubiquitous 'security' is coming to overlay prior primary concerns with 'discipline' as the key resource for the management of populations. In the process, we come to find ourselves in a situation in which Clausewitz's classic formulation via inversion - 'War is a mere continuation of policy by other means' (1984 [1832]: 87) – is flipped back upon itself to become 'Politics is war by other means' (Foucault, 2003: 163); and war thus itself becomes ubiquitous as the 'grid of intelligibility' (ibid.) through which politics is understood.

This 'security' is worked through and derivative upon identifying data, in ways that mirror the logic of the financial derivative.

[T]he contemporary security derivative is not centred on who we are, nor even on what our data say about us, but on what can be imagined and inferred about who we might be – on our very proclivities and potentialities (Amoore, 2011: 24).

What the 'data' or 'security derivative' (Amoore, 2011) and the 'financial derivative' share is their ultimate *indifference* (Martin, 2007; Amoore, 2011) to the underlying state of the world, which can seemingly be deleted from thought once its relation to its derived form is severed and the potential future is already there in the present. And just as the intensifications we witnessed in the history of finance do not entail deletion of previous practice, so too do the concerns of security co-exist with preceding disciplinary concerns. In Martin's consideration of these matters, in the place of industrial economy we find a thoroughly financialised economy ruled by a *derivative logic* that is intimately tied to a different form of relationship to knowledge and ignorance than that which held sway for the preceding half century. So we turn now to consider the ways in which this derivative logic plays out when we come to consider a *third category* of individuals in relation to risk; those more utterly 'Other' creatures whose activities, or more precisely whose *potential* activities, are seen to pose more direct risks to us.

For both Smith and Martin, the oft quoted words of one-time US Secretary of Defense, Donald Rumsfeld provide an illuminating way in. To remind readers who slept through the noughties, this is what Rumsfeld said in the most quoted segment of his most mocked speech of the period:

[T]here are no 'knowns.' There are things we know that we know. There are known unknowns. That is to say there are things that we now know we don't know. But there are also unknown unknowns. There are things we don't know we don't know. (Rumsfeld, 2002, in Martin, 2015: 45).

For Martin, the kernel of insight in Rumsfeld's words is to be found in the interrelationships between knowledge, non-knowledge and action afforded. In words that mirror the torture in those of Rumsfeld that were such a gift to the soundbite driven media, Martin notes that: 'Knowledge failure, here mistaking the absence of evidence for the evidence of absence, ensures a problem that knowledge will be obliged to address but will never master' (2015: 46). As Rotman (1987) also notes, this confusion and various ways of addressing it practically have been at the heart of the financial system since the discovery of zero and associated conceptual apparatus worked its way through European understanding. Nor is Martin alone in seeing that the relation of knowledge, non-knowledge and policy is inevitably a political one. An understanding perhaps most pronounced in Mirowski's (2013) meticulous tracing of the ways in which what he terms the Neoliberal Thought Collective actively seeks to engineer social conditions in which widespread ignorance and confusion can parade as moral goods due to their function as bedrocks of a (suitably rethought) democratic set of freedoms.

There is also something here about a ubiquitous issue with knowledge and indeed that reflexive part of it that is aware that others too are seeking to know - and seeking to know what we know (of what they know...). And there's something that mirrors the lionised arrogance of the contrarian position in financial trading – that position that seeks to see where the crowd is moving and profit from doing otherwise. This is a position from which oneself and only oneself can see *the* truth of the situation, and this inevitably slides out into a state in which 'truth' joins 'economy' in being no longer meaningfully thinkable. Whether or not stories of previous ages with clear origins for their values⁷ are mythical, for Martin this derivative logic unanchors world and makes any return to simple settlement of unambiguous value impossible. This is mirrored in Smith's insistence that in the contemporary world of war amongst the people, the possibility of a decisive military act to achieve a relatively stable political goal is but a mirage. Such decisive outcomes made sense within the grid of intelligibility that the paradigm of industrial war offered. Decisive outcomes are simply off-grid; perpetually deferred in the (derivative) logics of action that now pertain.

In both matters martial and financial we also witness the ways in which regulation becomes intimately entangled in the processes afoot rather than guardian to police from outside. Indeed, it is more and more the case that non/knowledge of the intent of regulation, the letter of the law, and its potential for frustration, are key knowledge relations in all fields of governance. Just as the terms of every ceasefire become the basis for calculating the next surprising move in the jockeying for position and status on what remains of the battlefield in our postmodern theatres of destruction, so every moment of espoused 'deregulation' of financial markets actually becomes the impetus for flurries of new and re-regulation. And so does every moment of regulatory intervention become an opportunity for engineering of a new emergent opportunity of avoidance and/or arbitrage in a game in which value doesn't so much resemble cat and mouse as it does the proverbial person in quicksand who sinks all the quicker the more they realise they're sinking and seek to act to prevent it (see MacKenzie, 2008, for a particularly amusing example).

This paradox of regulation in a knowledge economy is that it is derided as unnecessary for transparently knowable markets yet essential for them to work to price nonknowledge of the future (Martin, 2015: 57).

Knowledge of the future is also seen to be vital for those who are charged with securing our position in it, as our consideration of Rumsfeld's words makes clear. So what else has the military industrial complex been able to do with these insights? How have they sought to price and profit from (non)knowledge of the future? Pleasingly, for our purposes here, they've made moves along this path in very visible steps. And we turn now to consider those before drawing to conclude our account of the relationship between financial and martial forms.

The Policy Analysis Market and its Demise: A Partial Derivation?

In July 28, 2003, two senators announced that a Pentagon betting market on terror attacks was about to open, which terrorists could abuse. Amid widespread condemnation, this project ended the next day. The day after that, its widely reviled supervisor John Poindexter resigned. (Hanson, 2005).

So what was the Policy Analysis Market? And why was it both so controversial and, consequently, so short lived? Here is the 'Concept Overview' from the original PAM website that appeared in July 2003:

⁷ To be read in the broadest sense. 'Value' here is akin to Bateson's 'information': 'difference that makes a difference' (1972: 315).

Analysts often use prices from various markets as indicators of potential events. The use of petroleum futures contract prices by analysts of the Middle East is a classic example. The Policy Analysis Market (PAM) refines this approach by trading futures contracts that deal with underlying fundamentals of relevance to the Middle East...

The contracts traded on PAM will be based on objective data and observable events. These contracts will be valuable because traders who are registered with PAM will use their money to acquire contracts. A PAM trader who believes that the price of a specific futures contract under-predicts the future status of the issue on which it is based can attempt to profit from his belief by buying the contract [and vice versa]... This price discovery process, with the prospect of profit and at pain of loss, is at the core of a market's predictive power.⁸

PAM is part of a collection of market technologies known either as 'Information Markets', or 'Prediction Markets'. Payoffs on such markets/exchanges can be absolute win-loss on the basis of the occurrence or not of a specified event (e.g. the Republican candidate winning the largest share of the popular vote in a US presidential election) or in proportion to a the size of a potentially continuously varying index, at a given date and time (e.g. the proportion of the popular vote garnered by the Republican candidate in a US presidential election). These markets are explicitly designed, and designed for a predictive purpose. Given their explicit orientation to the future, these markets are derivative to the core.

The end users of such prediction markets are therefore primarily those who look in from the outside (although such observers can and do also play within) rather than those who actually engage in trade upon the market itself. Robin Hanson provides a suitable vehicle for further exploring PAM. Hanson is Associate Professor of Economics at George Mason University. He was the principal apologist and protagonist for PAM both prior to its brief existence and in the furore surrounding and following its demise. He has been vociferous in his support for similar prediction markets, endlessly invoking them as of superior, or at the very least equal, predictive efficiency in comparison with other modes and technologies of futurology, such as use of opinion polls or consideration of the views of 'so-called experts'.

PAM's predictions were to emerge from enabling speculation on such then possible future occurrences as the overthrow of the King of Jordan, a North Korean missile attack and US recognition of Palestine, each by a pre-specified date. One would also have been able to bet on combinations of events such as these.

To illustrate the sort of contracts tradable on PAM, consider two issues tied to the now-historic case of pending hostilities between the United States and Iraq: (a) whether or not the Jordanian monarchy would be overthrown during hostilities between the United States and Iraq and (b) the ability of the Iraqi regime to persist for more than one month of hostilities. Each of these issues has two states; they occur or do not occur. A pair of futures contracts can therefore be defined for each issue and only one of each pair can end up as true:

...

To illustrate why such futures contracts would be traded, consider two PAM traders: a specialist in Jordanian domestic affairs and a specialist in U.S. military planning and operational capabilities – the first would feel comfortable trading in [the persistence of the Jordanian monarchy] while the second would feel comfortable trading in [the

⁸ http://www.ratical.org/ratville/CAH/linkscopy/PAM/pam_concept.htm, last accessed 31st January 2017.

persistence of the Iraqi regime]. But what about the potential for interaction between these issues and how can these two specialists comfortably express their views on interactions that only partially involve their expert knowledge? This is a job for PAM derivatives...

The PAM trading system makes sure that the prices for the futures contracts that span an issue add up to \$1.00; thus, a price is also a prediction; e.g., \$0.35 = 35% prediction of [overthrow of the Jordanian monarchy during hostilities (and thus 65% prediction of their persistence). For each \$0.35 staked, a dollar is the return if the monarchy is indeed overthrown in the period stipulated]. [Bets on]... joint outcomes for these two issues [are also possible] – the PAM trading system prices these so that they are equivalent to predictions as well. [This is the equivalent of an accumulator bet. So, to continue with this example, if persistence of the Iraqi regime through the hostilities is priced at \$0.50 then the combination of overthrow of both regimes is priced \$0.175 for each dollar of pay out, or about 6:1]

(available at http://www.ratical.org/ratville/CAH/linkscopy/PAM/pam_example.htm, last consulted 31st January 2017).

It was the possibility of trading and hence potentially profiting upon the prediction of events like these that primarily attracted the ire of the two US Senators, Ron Wyden (Democrat, Oregon) and Byron Dorgan (Democrat, North Dakota). In a joint letter to Admiral Poindexter our Democrats stated: 'Spending taxpayer dollars to create terrorism betting parlors is as wasteful as it is repugnant. The American people want the Federal government to use its resources enhancing our security, not gambling on it.' (http://wyden.senate.gov/media/2003/07282003_terrormarket.html, consulted 23rd February 2006). And it was the Senators' response to the proposed market and the incredible heat and light it generated in the media which led to the market's cancellation and Poindexter's resignation two days later.

In the aftermath of the debacle constituted by the concatenation of PAM's inauguration and demise, Hanson radically ramped up his defence of the project throughout media of all forms (see his PAM website for innumerable examples: mason.gmu.edu/~rhanson/policyanalysismarket.html, last consulted 17th January 2017). In his multiple appearances following the demise of PAM one of the most notable aspects of Hanson's performances was the endless invocation he made of examples of prediction markets that were seen, when judged retrospectively, to have met or surpassed predictions offered via other means. For example, whilst for Hanson, over more than a twelve-year period, the Iowa Electronic Markets (IEM)⁹...

when they've been able to compare the market price on a day with poll results, national poll results on that same day trying to predict the election, ... out of 600 times, over three-quarters of the time, the market was a more accurate estimate of the outcome than the polls were.¹⁰

...there are other more sober ways of making the comparison. Let's consider how Michael Abramowicz (2003: 19 - 20), in his AEI Brookings's Joint Centre for Regulatory Studies report on information markets and their possible uses in administrative decision-making, presents similar data, and quickly moves on to the killer point:

⁹ An electronic prediction markets developed and hosted by the University of Iowa in 1988 on which bets, or more generously, 'investments' can be made on the outcome of elections to public office.

¹⁰ Hanson, from March 14th 2003 discussion on *Wall Street Week* TV show, available at <http://www.pbs.org/wsw/tvprogram/warbetting.html>, consulted 2nd December 2005.

The ultimate question is whether experts or markets are likely to outperform the other on average assuming that equal resources are provided for each task... No set of even hypothetical experiments seems sufficient to provide a definitive answer, or at least one in favor of information markets...

Perhaps the most that can be said on the basis of... [the] experimental data is that information markets and well-motivated experts are roughly comparable... [A]ny ultimate benefit attributable to markets' information aggregation powers alone is likely to be relatively small.

Many prediction markets, PAM included, seem actively to encourage the insider trading that constitutes the *bête noir* of propitious trading on more 'natural' markets, at least in the public face of most Western economies. As Charles Polk, president of Netexchange, put it in relation to PAM:

'We welcome insider trading,' he said..., since it would move prices and send a signal to the Defense Department, and anyone else watching the market, that conditions were changing. By being willing to lose money on the market..., the Defense Department would be able to get information (quoted in Norris, 2003).

The possibility of insider trading was also central to the morally outraged critical responses that we considered earlier. Nightmare scenarios of Al Qaeda (the universal, spectral bogeyman of choice for that period of history, prior to more recent rebranding) not only plotting future atrocities but being able to self-fund them through successfully betting on their coming to pass were clearly much too tempting to be resisted by a parade of disgusted media and media-friendly demagogues. For example, Dorgan and Wyden, in denouncing PAM as 'grotesque' and 'morally repugnant', went on to add: 'This encourages terrorists to participate, either to profit from their activities or to bet against them to mislead US authorities.' For our prediction protagonists however the potential visibility of activity on the market on the part of those planning atrocities is one of its key virtues. Odd betting patterns, presumed to be by entrepreneurial terrorist planners, or indeed a double-bluff on their part, would act precisely to deliver the revelation of the future that the market was set up to achieve.

For Hanson our right to bet on the likelihood of future events is central to perpetuation of a suitably re-modelled freedom fit for a new world populated by risk managers and sources of risk to be profitably managed. But this freedom is a curiously unrecognisable one. It is perhaps most baldly articulated by Abramowicz, who, as we noted above, was not too bothered about the superiority of information markets' predictions, so long, it transpires, as they could still 'help discipline' those who would seek to exercise freedom, either in their own name or that of others. Disciplining is possible since 'the predictions of well-functioning information markets are objective' (2003, Executive Summary). The 'objective' here has a curious relation to the 'real'. For the objective is not so much the actually existing at any point in time, rather it is that which can be ascertained with certainty at that point in time. Consider as particular exemplification of this point the following. Abramowicz, in suggesting ever more arcane ways to ensure that only informed traders hold sway in the final analysis of a market's arbitration, posits the possibility of a two stage information market. In the first players effectively bet on the outcome of a second, with the second open only briefly, after the close of the first – with only the payouts of the second dependent upon the verification (or not) of some future 'real world' event. For Abramowicz one virtue of such a device is that 'there will no longer be risk associated with real world randomness' (2003: note 156), reflecting market evangelists' abiding obsession with the separation of meaningful information from random noise. It is thus not reality itself - and the randomness it often entails - that concerns those that seek solace in prediction markets but rather certainty and reduction; a reality perhaps, but like the freedom we encountered above, only that reality which has been suitably reformulated. Made single, indisputable, and dead; not manifold, contestable and lived. Indifferent: just as the financial derivative is to the underlying asset (Bryan and

Rafferty, 2006; Wigan, 2009); and the security derivative is to underlying 'people, places or events' (Amoore, 2011: 24).

The lack of real prediction associated with PAM and similar systems is made abundantly clear by Mason Richey (2005). Here PAM is indicted not for the reasons we have encountered above in the media furore surrounding its announcement but rather on more philosophical terms. Richey also follows the logic of PAM to its self-defeating conclusion. Traders purchase a contract on PAM if they think its underlying event is more likely than its current price would suggest. *En masse* such trading will raise the price of that contract. But PAM is an information and prediction market. Its *raison d'être* is to provide a signal to those who are interested in the occurrence, or rather the prevention, of the events that underlie traded contracts. Thus a rise in prices is likely to instigate a response from those for whom the market was created as signalling mechanism. In turn this thus reduces the likelihood of the occurrence of the event. I bet, you see I bet, you act, I lose. Or as Richey puts it: 'The idea that government authorities employ the market to foresee events that they will prevent would, *a priori*, mute the signal.' (2005: 10). But this is not the most fundamental of the flaws. It merely reflects one of a deeper level. In the act of specification of the possible future, the job that the signalling market of derivatives is intended to achieve is already done:

[T]he derivatives of maximal predictive interest, the impetus for the system's design, terrorism derivatives, must be explicitly articulated in order to be offered. But if the market designers can list a specific terrorist event, then they have already defined, determined, and predicted the very event that the market is designed to identify. If the market designers know which terrorist derivatives to offer, then they have already done the work of the market. (Richey, 2005: 10).

For Richey then: 'The system does both too little and too much' (2005: 10). More broadly, following Martin (2007, 2015), that which we would have previously recognised as 'prediction' finds itself in relentless retreat in the face of the transformations that derivative logic engenders across our world. Anderson delineates different forms of what he terms 'anticipatory logics' in the following terms:

Precaution, preemption and preparedness are all means of guiding action once the future has been problematized in a certain way – as a disruptive surprise and each are deployed once specific futures have been made present through practices of calculation, performance or imagination' (2010: 791).¹¹

Derivatives are always and forever derived and deployed in advance. And in so being they constitute a move away from prediction towards pre-emption in ever more fields of existence. So, for example, monetarist policy in relation to the economy acts to pre-empt risks to value from inflation by raising interest rates at the mere sign of a potential future rise in prices, just as analysts mark down stock when performance does not match prior expectations (Macintosh et al, 2000). But once the future has been 'profaned' (Martin, 2007: 4) in this way, by being re-presented in the present, in advance, a process is enacted that is difficult to halt.

In militaristic terms this is perhaps most visible in the so-called War on Terror; a war enacted through pre-emptive attacks upon, most visibly, Afghanistan and Iraq. And in security terms it is most apparent in the ways in which historical data is processed by algorithms to produce flags on those seeking to enter a territory or persist within it that differentially signal a pass, a need for further investigation or a refusal or exclusion (see, for example, Amoore, 2011). The idea that the Defense Department would

¹¹ For the sake of completeness here, for Anderson (2010) an exemplar of precaution would be a nuclear non-proliferation treaty and that of preparedness would be the civic exercises of emergency planning.

consult a prediction technology such as PAM to pre-empt terrorist attack is therefore entirely consistent with this logic. Yet a complex teleology is afoot here. Remaining with the territories mentioned already what we witness is a series of transformations whereby irregular allies from cold-war, neo-colonial adventures are deemed obsolescent for emerging circumstances and are no longer supported for their securing virtues in relation to the 'threats' of communism (in the case of Osama and the Mujahedeen in Afghanistan) and undomesticated Islamism (in the case of Saddam and the Ba'athist regime in Iraq) (see, for example, Martin, 2007). But just like securitised (bad) mortgage debt, once mobilised these forces do not simply fade away when the initial framework of support is ruptured. In the face of the indifference of their designers, their capacities live on to potentially be re-directed to produce new risks that might emerge in a new future yet to come. And given they are then sources of risks to *us*, it appears only sensible to act now to prevent their realisation via pre-emptive attack, under whatever justificatory cover one can find to hand. But as Smith (2006) makes clear, such pre-emption is now doomed to take place in a time in which decisive victory is impossible (regardless of how many times we, as home populations, are told that the mission's objectives have been achieved). So we find ourselves not with a resolution of a potential threat but rather with Heidegger's (1977) 'gigantic'; a self-fulfilling prophesy in which the unceasing attempt to trammel or eliminate the world's existing uncertainties becomes ever more the source from which further new uncertainties emerge.¹² Our actions have enabled the fairly minimal forces of some prior allies to be effectively leveraged into an international front of affront; an ever more connected foe for the West; a dispersed protagonist of terror to meet the need of an opponent in a War conducted on an expanding world of Terror, pre-produced in advance.

The Precarious Production of Synthetic Securities

In Martin's account, the three key elements of derivative logic that are most salient for grasping the emerging particularity of our times are risk, its leveraging and the processes of disassembly and reassembly of attributes of prior wholes through which that leveraging is achieved. In the case of financial derivatives this triptych may be exemplified by ABACUS 2007-ac1, the synthetic vehicle that replicated performance of various collateralised debt obligations (CDOs) through a series of credit default swaps (CDSs) that was used by John A Paulson to profit from his more pessimistic take on the future of the mortgage industry in the run up to the 2008 global financial crisis. Paulson persuaded Goldman Sachs to assemble a synthetic CDO that mirrored the interest payments on a bundle of mortgages that he believed to be amongst those most vulnerable to default when home owners felt any financial pinch. He then waited for Goldman's slick marketing department to sell these products to various financial intermediaries, who at the time would have believed that interest payments on mortgages, particularly agglomerated mortgages that could statistically absorb the occasional aberrant default, were investments as safe as houses. Paulson believed otherwise and thus once the products were out there in the market, he was able to bet on their failure via the purchase of CDSs on the underlying synthetic CDO. Through this particular set of disassembly, reassembly and leverage of risk, Paulson was able to take a profit to the tune of one billion dollars. And the bill was paid, in as close as one can get to a final analysis in a world in sway to derivative logic, by the US taxpayer. Via the Troubled Asset Relief Programme (TARP), the Federal Reserve attempted to pre-empt any further collapse of 'economy' in the face of the emerging crisis of 2008 by writing a cheque to the major financial houses, with apparently no strings attached (Martin, 2015: 33).

In the context of the military, the synthetic derivative has more immediately visible material form but certainly follows a similar logic. We have already seen how military action is increasingly pre-emptive in its deployment. Just as the exemplary terrorist foe leverages their minimal military might, in respect

¹² Just as we find that our attempts to secure value through the use of derivative contracts exposes and ties us ever more directly to those who would leverage their speculations through these devices.

of the states they oppose, to cause the maximum of fear, disruption and, ideally, illiberal response, so too does military organisation increasingly work through a process of leverage. And it too does so, mirroring the 'cell form' and 'rogue homegrown vs loose international alliances' distinctions of its exemplary enemy, via synthesised means. Military endeavour moves away from industrial, monolithic deployment at scale and becomes a tailored product made up of ever more expensive baroque technologies (Kaldor, 1981) and drones, by ever more 'special' cyborganised forces 'trained to undertake greater personal risk in exchange for the prospect of substantial politico-military reward' (Martin, 2007: 10). Such forces act within and between assemblages of private security contractors (Godfrey et al, 2014) and local forces in a monstrous admixture that resembles nothing quite so much as the synthetic derivative concatenations and miscegenations of high finance. Here then we build upon Toffler and Toffler's (1993) insights into the intimate relationships between the making of war and the production and securing of wealth by drawing out the exemplary mechanism through which they are contemporarily connected. We find that it is the derivative that provides 'the revolutionary new linkage between knowledge, wealth and war' (Toffler and Toffler, 1993: 252) and it is this that now demands our 'profound understanding' (ibid.).

All of which leaves us with something of the classic Heideggerian bind when it comes to offering anything approaching a hopeful solution or resolution to our contemporary circumstances as they've been adumbrated here. As Martin has so diligently shown us:

The future no longer holds a promise that the constraints of the present can be transcended or transformed. Without a conviction that the future bears our dreams, the idea of progress becomes difficult to sustain (2007: 4).

Read optimistically however, the point to be taken here is that a better future cannot be knowingly sought, at least not without an embrace of a reactionary, conservative nostalgia for timeless values to which we could somehow return. Such was always and forever a chimera and one that has been used to justify all sorts of anti-progressive movement.

We would suggest that beyond the inherent unknowability of a future worthy of the name we are also grappling here with an emergent grid of intelligibility which remains somewhat unintelligible to those of us living within its emergence. The shift to an unending war amongst the people is mirrored in a financial set-up in which all possible sites for accumulation and maintenance of value are themselves in perpetual mortal combat. The Policy Analysis Market thus appears as more than mere amusing interlude. It is one of the most vivid examples available to us of how the logics that motivate both financial and security concerns can come together in an attempt to give us purchase on a present that is already bloated with futures. Futures derived from circumstances of war amongst the people but deployed to facilitate now impossible decisive actions that only make sense from a prior grid of intelligibility in which wars and war can be ended.

What we've also learnt, as organisation theorists, is that perpetual war amongst the people is not restricted to any formal battlefield. Rather, all of us and all that we value are caught up in these circumstances and in perpetual relation, through the ubiquitous logic of the derivative. We just need to work out how its contestations can bring us to congregate, commune and co-operate rather than just compete and conflict. Perhaps our hopes should reside in a celebration of the weird and occasionally wonderful imbrications that can come to pass when all manner of things with which we are confronted find themselves in surprising interaction with one another. Just as a copula in the formula modelling the behaviour of mortgage defaults can connect a dancer in Dayton with a tiler in Tonbridge Wells (see MacKenzie, 2011), so too can derivative logic remind us of our capacity to move together, without hierarchy, in pleasure as well as in pain. There will always be a remainder to the future, a share, perhaps accursed (Bataille, 1988, in Martin, 2007 and Martin, 2015) that will overflow the banks of the river of time that the derivative has tried to trammel for us. We just can't specify

what it is in advance or what we should do with it, without the risk of its potential being actualised and managed before it is properly realised.

REFERENCES

- Abramowicz, M. (2003) 'Information Markets, Administrative Decisionmaking, and Predictive Cost-Benefit Analysis', Related publication 03-18, *AEI-Brookings Joint Center for Regulatory Studies*, available at <http://www.aei-brookings.org/publications/abstract.php?pid=370>, last consulted 24th February 2006.
- Adey, P. and Anderson, B. (2012) 'Anticipating Emergencies: Technologies of Preparedness and the Matter of Security', *Security Dialogue*, 43(2): 99-117.
- Amoore, L. (2011) 'Data Derivatives: On the Emergence of a Security Risk Calculus for Our Times', *Theory, Culture & Society*, 28(6): 24 – 43.
- Anderson, B. (2010) 'Preemption, precaution, preparedness: Anticipatory action and future geographies', *Progress in Human Geography*, 34(6): 777-798.
- Aradau, C. and van Munster, R. (2007) 'Governing terrorism through risk: Taking precautions, (un)knowing the future', *European Journal of International Relations*, 13(1): 89-115.
- Author(s) et al (2014)
- Bataille, G. (1988) *The Accursed Share: An Essay on General Economy, Volume 1: Consumption*, New York: Zone.
- Bateson, G. (1972) *Steps to an Ecology of Mind: Collective Essays in Anthropology, Psychiatry, Evolution, and Epistemology*, Northvale, NJ: Jason Aronson.
- Bryan, D. and Rafferty, M. (2006) *Capitalism With Derivatives: A Political Economy of Financial Derivatives, Capital and Class*, Basingstoke: Palgrave.
- Clausewitz, Carl von (1984) [1832], Howard, M. and Paret, P. (eds), *On War* [Vom Krieg], New Jersey: Princeton University Press.
- Bitter Lake* (2015) Directed by A. Curtis, UK, BBC [Television Documentary].
- de Goede, M. (2005) 'Resocialising and repoliticising financial markets: Contours of social studies of finance', *Economic Sociology: European Electronic Newsletter*, 6(3): 19-28.
- Fama, E. (1970) 'Efficient Capital Markets: A Review of Theory and Empirical Work', *The Journal of Finance*, 25 (2): 383-417.
- Foucault, M. (2003) *Society must be defended*, tr. D. Macy, New York: Picador.
- Godfrey, R., Brewis, J., Grady, J. and Grocott, C. (2014) 'The Private Military Industry and Neoliberal Imperialism: Mapping the Terrain', *Organization*, 21(1): 106-135.
- Gow, J. (2006) 'The new Clausewitz? War, force, art and utility – Rupert Smith on 21st century strategy, operations and tactics in a comprehensive context', *Journal of Strategic Studies*, 29(6): 1151-1170.
- Hanson, R. (2005) <http://hanson.gmu.edu/policyanalysismarket.html>, consulted August 30th (slightly different text now appears on the same URL).

Heidegger, M. (1977 [1938]) *The Question Concerning Technology and other Essays*, New York: Harper Perennial.

Hilferding (1910/1981) *Das Finanzkapital/Finance capital a study of the latest phase of capitalist development*, T. Bottomore (ed.), tr. by Morris Watnick and Sam Gordon, London Routledge & Kegan Paul.

Kavanagh, D., Lightfoot, G. & Lilley, S. (2014) 'Finance past, finance future: a brief exploration of the evolution of financial practices', *Management & Organizational History*, 9(2): 135-149.

Kaldor, M. (1981) *The Baroque Arsenal*, New York: Hill and Wang.

Macintosh, N., Shearer, T., Thornton, D. and Welker, M. (2000) 'Accounting as simulacrum and hyperreality: Perspectives on income and capital', *Accounting, Organizations and Society*, 25(1):13-50.

MacKenzie, D. (2008) 'End-of-the-World Trade', *London Review of Books*, 30 (9): 24-26.

MacKenzie, D. (2011) 'The Credit Crisis as a Problem in the Sociology of Knowledge 1', *American Journal of Sociology*, 116(6): 1778-1841.

Martin, R. (2007) *An Empire of Indifference: American War and the Financial Logic of Risk Management*, Durham, NC: Duke.

Martin, R. (2015) *Knowledge Ltd: Toward a Social Logic of the Derivative*, Philadelphia, PA: Temple.

Mirowski, P. (2013) *Never Let a Serious Crisis Go to Waste: How Neoliberalism Survived the Financial Meltdown*, New York: Verso.

Norris, F. (2003) 'Ideas & Trends; Betting on Terror: What Markets Can Reveal', *New York Times*, August 3, available at <http://hanson.gmu.edu/PAM/press/NYT-8-3-03.htm>, consulted 5th December 2005.

Richey, M. (2005) 'Thoughts on the Theory and Practice of Speculative Markets *qua* Event Predictors', *Essays in Philosophy*, 6 (1). Also available at <http://www.humboldt.edu/~essays/richey.html>, last consulted 24th February 2006.

Rotman, B. (1987) *Signifying Nothing: The Semiotics of Zero*, Basingstoke: Macmillan.

Simondon, G. (1980) *On the Mode of Existence of Technical Objects*, tr. N. Mallahphy, London: University of Western Ontario.

Smith, R. (2006) *The Utility of Force: The Art of War in the Modern World*, London: Penguin.

Toffler, A. and Toffler, H. (1993) *War and Anti-War: Survival at the Dawn of the 21st Century*, Boston: Little, Brown and Co.

Wigan, D. (2009) 'Financialisation and Derivatives: Constructing an Artifice of Indifference', *Competition & Change*, 13(2): 157-172.