Risk and Cultural Investment

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Introduction

Mathematically, the derivative of a function (a relationship of certain defined elements of variable magnitude) is a measure of its rate of change at any single point, and the process of determining the value of this instantaneous rate of change is known as differentiation. In calculus, the reverse movement from the derivative to its context, its underlying condition, is known as integration.

The connection between the worlds of calculus and the financial derivative is simultaneously broad-brushed and hyper-technical. Just as the financial derivative is placed at one remove from the assets (property, for example) on which it is based, so is the derivative of a function at one remove (so to speak) from the function. In both cases, whether the mathematical or financial derivative, what is at stake is change in value. In the case of the financial derivatives contract, the critical interest is in the difference between the price paid for the contract and its value at the end of the contract period, but also - because the contract is tradable - at all intermediate times between the time of the agreement and the end of the contract period.

The very wide variety of conditions which can form part of a financial derivatives contract has given rise to the sub-discipline of financial calculus, and this interpenetration of mathematics and finance emerged especially out of the work of ‘financial engineers’ from the beginning of the 1970s. In 1973, the Chicago Board Options Exchange was created, as was the Black-Scholes options pricing model. The latter model was for a formula determining the value of an option to buy or sell at a contracted price (by a set time in the future) in terms of the market price of the stock at any given time. It set up ‘a mathematical framework that formed the basis for an explosive revolution in the use of derivatives.’ (Chance 1995:58)

It is the aim of this present discussion to ask if it might be possible to engage with the financial and mathematical language of derivatives, and the experience of the derivatives markets, to examine the world of cultural investment, and to consider the claims made by and the demands made upon the ‘cultural sector’ with respect to the changes that cultural investment can or should bring about.

The Question of Precision

The basic rule of calculus is that integration and differentiation are mirror image processes. The outcome of the differentiation of a function, when subjected to the process of integration produces the original function. They are linked in as rigorous a way as addition and subtraction are. The demonstrable integrity\(^1\) of calculus meant that it soon came to be seen to be as reliable a technique as the drawing of a straight line on a plan. The techniques of calculus enable engineers to design physical systems as apparently simple as propane gas cylinders and as enormously complex as space missions to Saturn.

What is the impact on the mathematics used when a project fails?

Designing a suspension bridge requires the use of calculus, to determine, amongst other things, the length of its parabolic cables. When the Tacoma Narrows

\(^1\) And, we might add, utility – as calculus became indispensable for solving structural design problems for every context involving motion and change.
Bridge failed in 1940, it was hardly even thought that it might demonstrate the invalidity of the mathematical techniques used in the project design. Where a project fails – so it came to be understood – it was not generally because ‘proven’ processes like differentiation had broken down. It would be because situational conditions were not fully described, and so not taken proper account of in the specification of variables, to which processes of calculation were then applied. Following the spectacular failure at Tacoma, wind action on suspension bridges was understood to be much more complex than had previously been realised. Nevertheless, it is important to note that while the associated processes are still not fully understood (Matsumoto), the consequences of still uncompleted mathematical modelling of wind effects have been mitigated by wind tunnel testing, which provides a ‘real’ test environment rather than a mathematically modelled virtual one. So it is that suspension bridges still get longer, with the Akashi Kaikyo Bridge, linking the islands of Honshu and Shikoku having a centre section which is more than a mile long.

Definitive formal fully-theorised understanding of relevant processes, therefore, is not necessarily a project pre-requisite, as long as there is a reliable mechanism for taking account – to the extent that is required - of all the relevant variables. Another way of putting this is that development risk should be a function of the possibility that critical situational variables are either unrecognised or assume values outside of their expected range. What Matsumoto’s work tells us is that the application of mathematical procedures to the design of physical systems will not lead to accurate predictions of the specific states caused by a specified combination of quantified variables. For any design to be fit for purpose, however, the specific state of the system must be accurately predicted to fall within a range. We can see from this that the formally impregnable reversibility between differentiation and integration, expressed in the fundamental law of calculus, is not going to take us straightforwardly to actual processes in the social or physical world. As Eugene Wigner, the Nobel Prize-winning particle physicist, said,

> conditional statements are probability laws which enable us only to place intelligent bets on future properties of the inanimate world, based on the knowledge of the present state. They do not allow us to make categorical statements, not even categorical statements conditional on the present state of the world. (p.5)

So, to be crystal clear, excavating the mathematical language of derivatives can in no way be seen to promise a clear route to precision. The question of whether it might enable rather more intelligent bets to be made on the future properties of the world with which we are concerned is one with which, however, we are very much concerned.

**Financial Derivatives**

There are three forms of contract that can be combined to form the complex financial instruments known as derivatives. The first form is that of the future: an agreement to buy a precise amount of a specific commodity for a fixed price at a given time in the future. The second form is the option, this is similar to the future but the element of obligation is replaced by an up-front purchase of a right to either buy or sell at a specific rate a specific quantity of the goods concerned at a particular
time. The third form of contract is known as the swap, and this is an agreement to exchange two income streams whose present value is identical, but to do this without exchanging the underlying sources of those income streams (usually referred to as the principals).

Financial derivatives are not assets in the same way that a block of shares in a company constitutes assets. Financial derivatives are contracts: to buy, sell or swap. Time is the critical dimension. Because the contracted deal will not be completed until some time in the future, and because the assets from which the contracts are derived may vary in value between the contract date and its completion date, a market can emerge: not the market for the primary asset - whether it is property, beef, Swiss francs, or whatever – but a market in rights and obligations with respect to that primary market. In other words, a derivative market.

At the beginning of the 1970s, the USA was about to legislate to make it possible for its stock traders to trade in options as well as primaries. They had been barred from doing so since the Depression, since such activities were seen as gambling pure and simple. But as illustrated by the example of Volkswagen’s failure to hedge their foreign currency position fully thereby losing nearly a billion dollars in the first half of 2003 (Fairlamb 2003), such a distinction between gambling and insurance is hard to sustain. There was, however, a problem. There was no agreed methodology for valuing derivatives. In 1973, the Black-Scholes options-pricing model provided it. It is worth examining their model, and drawing out the assumptions behind it.²

Black and Scholes posed their central question as follows: assuming that a derivatives market should not be a place where certain profits can be made by constructing a portfolio of some options to hold onto because they will increase in value, and others to sell in the expectation that they will become available to buy at a cheaper price later, is there a way that the valuation methodology for options can be constructed so as to secure that as the prime attribute of the market? They develop their position on the basis of the option known as a ‘call’: an option to buy an item of

² From the 1920s through the Second World War, the requirement to take precautions against serious adverse market movements, by hedging (making a relatively small ‘bet’ that the market would move adversely, to ‘insure’ against such an eventuality), was limited. As Meier notes, the Bretton Woods system mostly prevented routine market fluctuations of any great size. Akyüz (1995: 55-6) describes, in his well-cited summary, the consequences of the collapse of that system. The market shift from fixed to floating exchange rates created unpredictable movements which market traders had to learn to deal with. The situation was further complicated by the existence of different rates of inflation worldwide. With various national strategies being tried to reduce inflation, with more or less success, the scene was set for regular dramatic swings in relative currency values. Naturally enough, new financial mechanisms were developed to counteract the potentially disastrous consequences of currency exchange variations for global capital. The importance of the institutions established in the early 1970s, like the Chicago Mercantile Exchange, did not diminish as the phenomenon of system-wide inflation appeared to become much less important from the later 1980s forward. By this time the financial derivatives markets had become irreplaceable in providing instruments for investment, hedging and speculation. Perhaps, as Pryke and Allen (2000) note, Max Weber’s judgement from 1896 remains perceptive: that while derivatives create instability because they do encourage risk-taking, they also allow market expansion and accessibility.

³ It is not necessary here to deal with the differential equations which are used to analyse random distribution. It is, however, worth noting that the whole point of derivatives markets is that they derive regularity from randomness. It is assumed that ‘stock price follows a random walk in continuous time with a variance rate proportional to the square of the stock price. Thus the distribution of positive stock prices at the end of any finite interval is lognormal. The variance rate of the return on the stock is constant’ (Black and Scholes 1973: 640)
stock at a fixed price on or by a given time in the future. As the stock price rises, the value of the call rises, and as the stock falls so does the value of the option. As the maturity date approaches, the value of the option will depend on the relation between its original ‘striking’ price and the current share value. The formula they develop is complex, but it has to be so because it needs to factor in the other variables that link to the known risks which affect the market. It does this in part by using the concept of the discount bond, such that where the stock price is currently higher than the striking price, the current value of the present money commitment entailed by owning the option is determined by the price of a discount bond that will pay that price on the striking date. Intuitively that part of the formulation is a shade complex but ultimately clear. In previous work (Sprenkle 1961), the attempt to produce a formula for option value had incorporated a discount factor, dependent on the risk profile of the stock concerned. Samuelson had tried to improve on Sprenkle, by further developing the concept of the warrant (a corporate liability which is more complex than an option, usually extending over years rather than months, and with the possibility of changes in striking price at given dates during the period of the warrant, and where other forms of variation – for example, payment form, or contingency arrangements in the event of takeover or merger – may be specified). When Samuelson and Merton developed this work further (1969), they still, however – and this was the crucial breakthrough which Scholes and Black would make – did not see that as well as linking the option value to the share price, it also had to be linked to the position of the investor. Investors, in principle, were conceptualised, for the purposes of the Black-Scholes model, as prepared to invest in all the available stock and options with respect to a given listing, and as holding other assets within a complex portfolio which is entirely hedged so that its expected return is equal to that from an equivalent riskless asset. Putting all these factors together, Black and Scholes (p.641) show that then: ‘the value of the option will depend only on the price of the stock and time and on variables that are taken to be known constants.’ As stock price and time changes, the number of options to be sold short to hedge the investor’s position changes, and if this adjustment is made constantly, the return on the hedged position becomes certain.

Overall, then, that derivatives markets can be shown to possess the capacity to aid the investor to allay risk in exchange for the expectation of rate of return approaching the market norm enabled them to be defined as essentially investment vehicles rather than gaming enterprises.4 Nevertheless, the emergence of financial derivatives markets inevitably led to regulation.5 The basic criminal and civil law provides some protection for shareholders and creditors (Lel 2006). As can be seen however in the development of

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4 This is not the place to examine the epistemological objections to the mathematical economics on which the theory and practice of derivatives is based, but Joan Robinson has argued that the entire house of cards may collapse because it is based on the assumption that, ceteris paribus, economic forces tend toward establishing equilibrium (expressed as a price) between supply and demand, and this primal assumption ‘uses a metaphor based on space to explain a process which takes place in time’ (Robinson 1953: 255). It is, however, interesting to accept that insight, but turn it around, and recognise that the effectiveness of the derivatives markets rests precisely on their ability to translate temporal risk into spatial regularity.

5 It is interesting to note that one of the key members of the neo-Marxist macroeconomic regulation school - Michael Aglietta (2001) – seemed to find the legislative regulation of the derivatives markets largely irrelevant, because their very existence has, for him the seriously deplorable consequence that they lower the growth rate. The basis of his argument needs to be considered carefully in the context of the possible developments in the cultural sector which are being advanced below.
the key US regulatory institutions, The Commodity Futures Trading Commission, established in 1974, and the Securities and Exchange Commission, formed in the aftermath of the Depression in 1934, an alliance of state and corporate sector has operated ‘to protect investors, maintain fair, orderly, and efficient markets, and facilitate capital formation.’ (SEC 2007) The essence of regulation is understood in both institutions to be about disclosure of information and the prevention of fraud. There is no hiding from the fact that investment in the securities and futures markets is riskier than simply placing money in federally guaranteed banks, but bodies like the CFTC and SEC, and their counterparts across the world, sought to regulate the investment markets to try and ensure that investors were able to get full information about the risks they were going to take.

Has such regulation been effective? Consider the Leeson case in which Barings’ top Asian derivatives trader racked up a 1.4 billion dollar loss (Brown & Steenbeek 2001), or the Metallgesellschaft disaster in which the rock solid German company created a modest problem by over-diversifying, and then increased losses and debts to more than five billion dollars by trying desperately and unsuccessfully to generate compensatory short-term gains on the oil derivatives market, (Culp and Miller 1994), or the Orange County Case in which leveraged investment created a stock and derivatives portfolio worth more than twenty billion dollars leading to a 1.6 billion dollar loss (Jorion 1995), or the potential securitization of the business opportunities created by large-scale disaster (Klein 2006). These examples, and others like them, indicate to some that global derivatives markets dramatically increase risk, are rebarbative to external regulation, and develop, auto-poietically, their own forms of internal development. Edward LiPuma and Benjamin Lee (2004: 7-8) have spoken of the ‘mismatch… between the techno economic and socio institutional spheres, such that the economic system at least temporarily decouples financial capital from the organisation of production.’ Their worry is that ‘the globalising process now in motion is engendering a decoupling on a scale more encompassing, more powerful, and also perhaps more permanent than anything that has gone before.’

Aglietta, as we have noted already, does not think that decoupling is taking place, but rather that there is coupling with negative effects. On the other hand, Chicago School free-market economists have tended to argue that current regulations are adequate, and that further regulation demands are often underpinned by self interest, as was the case with 1990s demands for controls over certain Chicago-based institutions, made largely by those with a vested interest in the New York financial markets. (Miller 1994)

LiPuma and Lee divided critical response to the development of the derivatives markets into three types. First, neo-liberals regard the money form as the oxygen-carrier of capitalism: ‘the neo-liberal premise is that well functioning markets eventually and inevitably produce better social results than any government social engineering, “better” being defined as tending to maximise individual preferences” (14). Second, regulation theorists, anti-globalisation theorists and environmental activists are concerned that the global system is unstable, and fear the consequences of de-realisation, a bias toward circulation over production, and the continuing

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6 Recent research would tend to signal us to hold fire before accepting a ‘complexity’ approach to the analysis of the derivatives market. Macro-economically, it can certainly be argued that the derivatives market has become necessary to avoid cyclical economic depressions by making the over-accumulation of capital work to generate the new and substantive investment that we see in China, India and elsewhere (B renner 1998), but the evidence of emergent and qualitatively new properties arising from this entire global market worth over £270 trillion dollars (TowerGroup 2006) is not forthcoming - yet.
dominance of Western capital in its current financial form. Their third response is from neo-Keynsians, macroeconomists who regard government regulation of the economy as basic to the reproduction of any global system.

Overall, the case against the derivatives markets, on moral, regulatory, or macro-economic grounds seems relatively weak, although it must be said that the arguments that have been made, and the case studies that do exist, will help towards an assessment of whether the methodology of global finance might be usefully applied to the subject of cultural investment and its social impact derivatives.

**Cultural Derivatives**

The development of a ‘business case’ for a particular cultural investment - by reference, not only to the inherent worth of culture-in-itself, but also to its anticipated social impacts in terms, for example, of raised local self-esteem and regional pride leading to better levels of employment, entrepreneurialism, health, school attendance, etc (see Matarasso 1997, Boyne 2006) - is in part a process of differentiation. The function can be conceived as the relationship between environment, project design, and project management. The derivative of the function is expressed in terms of social impact, in the form of altering values of specified social variables. Reversing the process, namely accumulating the changes in specific social variables related to health, employment rates, levels of crime, etc, and determining from these measurements the state of the complex over-arching function linking environment, investment and management, is a process of integration. Development is differentiation-centred; audit is integration-centred.

We can use the term cultural derivative\(^7\) to refer to the impacts of cultural investment in changing the social environment. More specifically, it would refer to the rates of change, following the investment, in the relevant elements of that environment. Pursuing the mathematical analogy, we will imagine a clear set of links from the initial conditions (the function) constituted by the investment (building the Sage Music Centre in Newcastle-Gateshead, for example) to the social impacts (the cultural derivative) which followed from it (say - at a regional level [ca. 1000 square miles of surrounding area] - increased social capital, increased gross regional product, increased graduate retention, improved health, reduced truancy). The ‘business plan’ or ‘development case’ for the new cultural investment will not only say that the project is justified and worthwhile in itself, it will – especially in the British context - specify the range within which the anticipated impacts - the cultural derivatives\(^8\) - would be expected to fall.

Treating the social impacts of cultural investment as derivatives implies that the relationship between the cultural investment and its social impacts becomes contractual. Instead of a rhetorical prediction that investment in a new museum will

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\(^7\) It is already possible to see that the topological structure of derivatives is echoed within the cultural sector. In the world of cultural rhetoric, the three basic forms may be seen as the promise or pledge, the threat (that if something is not done, certain consequences will follow), and the substitute (especially common within a competitive context where a specific project must take on the range of alternative proposals being considered and the range of current provisions which are actually in place). Cultural strategies are formed by combining promises, threats and substitution proposals in different ways. The qualitative transformation and growth of the public sector within the Welfare State societies of the West operates through this logic.

\(^8\) The term ‘cultural derivative’ can be used in the singular and plural. When singular, the reference will be either abstract or to a single instance of a cultural derivative (e.g. Decrease in truancy); when plural, the term will refer to changes with respect to multiple parameters.
have the potential to increase regional employment, increase entrepreneurial start-ups and decrease street crime, pledged social impacts become the object of an enforceable contract. The management team for the new museum become the owners of the risk that the contract will not be met. If we assume that failing to meet social impact targets constitutes a breach of contract with the consequences understood in terms of the relevant values, with, for the sake of argument, loss of cultural values entailing a potential range of consequences from a postponed exhibition to permanent closure – then acute museum management will look for ways to hedge these risks and also reduce the chances of performance below the required range.

This is plainly ludicrous! Why should the cultural sector behave as if they were turkeys voting for an early Christmas? The answer quite simply is the potential growth that might be achieved through the development of a cultural derivatives market.

Hedging the risk that anticipated outcomes will fall below the expected range will require the development of new social instruments. One task here will be to design mechanisms which will be an effective counterbalance in the circumstances under which there is likely to be underperformance by the principal, and hence less value among the contracted cultural derivatives. This is an area which is hardly developed at all, and requires attention to the specification of those circumstances under which cultural investments can be expected to succeed in creating particular social impacts, and conversely to those contingencies which will mean underperformance. High performing derivatives may be matchable to low performing ones. The idea of matchability with respect to cultural derivatives refers to the possibility that contractual commitments to procure social impacts might be made less risky if they took advantage of the whole range of logical possibilities, such as ‘either…or’, ‘if…then’, ‘if…then not’, and so on. The derivatives contract which could become normal in the cultural sphere would be akin to the OTC contract. Additionlly, experimentation with cultural derivative methodology is made especially attractive by the phenomena of regionalism and multi-culturalism. Ideally individual cultural investments would specify quite complex cultural derivatives in order to satisfy regional needs, help realise potential and enhance communication. OTC developments would focus this in a dramatic way.

It is a basic principle of financial derivatives that speed reduces risk. Tomorrow will probably be like today; it is less certain that next year will be like this year, and even less secure that the next decade will be like this one. One of the difficulties of the cultural derivative and its underlying long cultural investments relates to the disparity between the short-term investment and the long-term result from the derivative. Up to now this has meant that cultural investment has been difficult to secure, but in a future era where entrepreneurial work to secure high-performing cultural derivatives will work to increase the quantity and velocity of cultural value from its first engagements, the cultural liquidity that will follow means that those who pledge have more opportunity to find funding streams and then to hedge their risks.

Over The Counter derivative contracts are different from those derivatives contracts which are purchased on the derivatives exchanges. They are negotiated individually, to satisfy multiple hedging needs with respect to complex projects such as planning the development of a new car plant or an international pipeline. In its last triennial survey in June 2006, the Bank of International Settlements reported that the market value of outstanding OTC derivatives contracts was 10 trillion dollars.

At the regional level, competitive identity is critical. Cultural investment constitutes a major contribution to regional branding which in turn helps to deliver competitive success in the fight for national resources and international markets. The cultural derivatives methodology which is potentially available could become a very useful tool for regional regeneration.
Even allowing for OTC complexities, however, we are still looking at a potential system which is merely a more penal version of the current one. Other instruments would be necessary. In particular, the ability to hedge the risks created by moving to a contractual system with respect to the attainment of social impact targets. How could this work? Just as OTC contracts combine swaps and different futures contracts, so it is that social impact risks may be reduced by sub-contracting some or all of the impact generation tasks to external agencies. To put it as plainly as possible, if social impacts matter, we may need to pay for a system which will transform potential for social impacts into production of the appropriate number of demonstrable impacts. This probably requires the development of new ranks of cultural intermediaries. It means the expansion of the cultural sector. It means larger audiences. It means increased density of cultural interactions. This does, however, impinge upon the traditional autonomy of the cultural sector, and incline to marginalise the current alliance between the popular mass media and the postmodern culture which inherited from the surrealists the challenge *épater le bourgeoisie*. It would privilege institutions like the Gateshead Sage Music Centre which place work with the community and their region at the heart of what they do, and would provide the impetus for the development of a cultural evaluation infrastructure that would not be restricted to researching the outcomes of cultural investment, but which would also be developed to work to reduce the risks that these outcomes fail to be achieved. It might be seen to privilege also the instrumental tendencies to be found in the UK’s contemporary audit culture, although further emphases on the connections between culture and community are - when it comes down to it – quite hard to challenge openly.

Crudely then, how much will have to be paid, or taken on in a swap arrangement, for an external agency to ensure that one or more of the contracted social impacts of the new heritage centre will fall within the required range. Or, what are the possibilities of converting part of a visitor stream to a successful free attraction to a less successful chargeable one, and how much would this be worth to the latter?\(^{12}\) It is comparatively easy to imagine how this might work, and might inject increased energies into new developments. But could it be extended to established cultural institutions, by treating periodic impact targets contractually? The answer to this is probably so, but only if there were resources to enable the price of increased certainty to be paid!

**Regression toward the Mean?**

We can infer from the example of the Suspension Bridge that the axiomatic perfection of the mathematical case is not likely to transfer easily to real applications, where we are likely to see evidence of a more pragmatic approach. Within the cultural sphere, the call is for this pragmatic but disciplined approach. We can take an example from the Museums area:

Consistent and convincing bodies of evidence about museums and what people get from them can strengthen the impact and work of the museums…a strong

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\(^{12}\) We will come slightly later to the question of how far this can be pushed before the participating institutions become de-legitimated, although, as we will see, using the concept of Value-at-Risk, developed from the experience of the early disasters which occurred in the derivatives sector, may not be particularly useful at this point, because of its avowedly quantitative stance.
body of evidence will help underpin and illustrate museums’ arguments for
resources to a wide range of potential funders...In the past, the sector has
sometimes seemed reluctant to work with Government to develop indicators and
statistics of value that can be used to prompt and inform policy decisions. This
reflects, perhaps, a general distrust and dislike of the need to quantify
performance as this begs the question of how to measure cultural quality…But
coherence, partnership and vision are linked to evidence…(DCMS 2005: 32-3)

That seems clear. Against a background of the globalisation of culture (examples
which spring to mind are the Guggenheim Museum in Bilbao and the Olympic Games
2012), attention must be paid to the evidence available about cultural derivatives. In
other words, we are likely to be looking to the reproduction and moulding of values,
atitudes, and social structures. If social structure and habitus outcomes cannot easily
be shown to derive from contemporary cultural investment, then the impacts which
are emerging from cultural investment projects are unlikely to be optimum for the
development of the sector as a whole.13 We must be careful here however. The
circulation of financial derivatives now has an entire global market worth probably
more than £300 trillion dollars, and is the biggest market on earth. Yet its existence
and referents seem to be almost entirely virtual, with the value of the market being
considerably greater than the sum total of all the currencies in circulation. The
cautions that is needed here is that these distantiating effects are not directly
comparable to the derivative effects created by cultural investments.14 What is
offered for reflection here is not the scale of the financial derivatives markets, but the
techniques for reducing cultural investment risks, which - as a by-product – would
mean some development and, admittedly, a degree of re-focusing of the cultural
system.

Cultural derivatives are expressions of the rates of change of social and
economic well-being measures. They are the form that cultural capital often assumes
in the functioning of political rhetoric. Structurally, they articulate forms of social
risk (for example, unemployment, ill health, low school attendance, entrepreneurial
latitude, divorce rates, etc.). Cultural derivatives, understood as expressions of
pledged rates of change among social key social variables, can lever-up the value of
cultural investments. They may enable the cultural sector to grow in size. They have
the potential to increase, in other words, the value of the underlying cultural assets. It
also happens that as the investment is levered-up by the derivative, the determination
to make sure it is successful takes forms which assure that the rhetorics of success
become more likely to mean something.

Would embracing market principals lead to a deterioration of national
cultures? Would we vault from the postmodern frying-pan into a derivatives inferno?
To place such a question in context, we might also pose the question of whether the
state investment underwritten trilogy of sport, entertainment and the spectacular has

13 Within the value frame of the arts and culture sector, aesthetic achievement and the reproduction of
cultural appreciation may matter much more than other cultural derivatives. Within a world defined by
scarcity and democratic accountability, however, it is unlikely that aesthetic derivatives alone can form
the basis of a revitalised investment environment for culture.
14 Worries about the impacts of the derivatives markets, that, for example, these markets led to the
relatively recent lift-shaft devaluation of currencies in Turkey, Argentina and Malaysia, or that they
link to the flascos at ENRON, Long-term Capital Management and Arthur Anderson, do not have much
purchase on the relation between cultural investment and derivative. They are derivatives of the
derivative, not of the investment, consequently there will be at least one novus actus interveniens and
usually many more intervening factors than that.
diminished collective life. The lack of concern for the social impact of television is one counter-model for what is offered for reflection here. But, perhaps it was always the case that the greatest talents went into the highest profile activities? In the world of Fine Art, defined in terms of its different disciplines, one can perhaps trace the decline of the traditional activities of figurative painting and expressive music composition. There may be no doubt that such fluctuations, modulated differently, can be seen in the history of all the arts. Nevertheless it has often been wondered whether postmodern cynicism is something qualitatively new, and it is natural enough to run on from this thought to a concern that a dash to emulate something so apparently tenuous and ungrounded as financial derivatives would be an act of philistinism. Without being certain that it is entirely appropriate to refer back to the experience of the financial derivatives market in order to address this question, we can nevertheless point to the Values-at-Risk developments that have, in recent years, sought to establish a degree of reliable knowledge with respect to some of the more extreme consequences of derivatives trading (Jorion 1997; Taleb 1996, 1997).

The general question here is whether pilot work to test the possibilities of a risk market model for cultural derivatives would itself risk diminution of cultural value. Here the non-quantitative nature of cultural value works in favour of the cultural sector, because it is quite possible that the deployment of derivatives methodology there would expand the sector, enhancing its energies, social relevance and skilled cadres at a cost of some adjustment in value orientation, but without immediately obvious and substantial risk to core Enlightenment and democratic values. Although it must be admitted that the initial phase of full operation of such a framework (perhaps in some ways comparable to circumstances within the world’s financial markets in the 1970s) would doubtless mean quite significant fluctuation and learning. To place the contrast between cultural value and financial value is another way, again emphasising the surprising advantage that the cultural sector might have here: ‘within the financial sector, connectivity breeds and multiplies risk’ (LiPuma and Lee, 53), but within the cultural sector connectivity also breeds and multiplies cultural value. And to the extent that this may not always be immediately true (in certain multi-cultural contexts, for example), the sharpest edge that the future cultural investor may possess could well be provided by a derivatives approach.

15 ‘Value-at-risk’ methodology aims to provide ways of estimating the risk of losses which might affect a portfolio of assets. It is a quantitative technique. Philippe Jorion (2005), in a study of the Orange County case, referred to earlier, puts it as follows:

‘VAR is the maximum loss over a target horizon such that there is a low, prespecified probability that the actual loss will be larger. Based on firm scientific foundations, VAR provides users with a summary measure of market risk. For instance, a bank might say that the daily VAR of its trading portfolio is $35 million at the 99% confidence level. In other words, there is only one chance in a hundred, under normal market conditions, for a loss greater than $35 million to occur.’

16 The fact that putting together a new Production Centre probably involves transactions across a dozen different countries and frontiers and currencies with all the risk of currency fluctuation and future uncertainties of market demand that that may imply, leads to the creation of insurance strategies to hedge major risks. These risks are quantified, insurance type contracts are organised to cover them, and then these risks are bought and sold on the derivatives market. Much the same is true in certain circumstances within the field of culture. Connectivity multiplies risk in multi-cultural societies (vertical and horizontal differences, e.g. age and gender as well as religion and ‘home’ culture). This connectivity cannot be ignored by policy makers, who therefore develop cultural proposals. Inherent within these proposals are pledges, threats and substitutions which will be ultimately be presented in terms of social impact and its trajectories. Because these cannot be quantified, and therefore a market does not develop, an energised rhetoric of confusion and combat takes its place. Despite, however, the
non-quantitative nature of these issues, it may be that the logic of markets does still have something to contribute to resolving such dilemmas.


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