3.5 GREAT PLANNING DISASTERS: WHAT LESSONS DO THEY HOLD?¹

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Introduction

The title, which this article shares with my forthcoming book;' might seem sensational-s-even sensationalist. But the component words may all be defined with some precision. 'Great' refers to large planning decisions involving considerable public investment. 'Planning' refers not merely to physical layout on the ground, but to any kind of decision that involves conscious forecasting, modelling, design of alternative solutions, and evaluation. 'Disasters', the most evocative word, refers to two kinds of outcome: positive disasters, where the decision to develop is implemented but where many informed observers later criticise the outcome; or negative disasters, where the plan is aborted at a late stage after considerable resources have been committed.

Examples of both types of disaster abound in the pages of recent history. Positive disasters include Concorde, the San Francisco Bay Area Rapid Transit System, and on grounds of cost escalation and delay the Sydney Opera House. Other candidates are various nuclear projects, motorways, rapid-transit systems, and the whole of Britain's high-rise building programme of the 1960s. Negative disasters including London's third airport, the London motorway system and many other abandoned or half-abandoned projects, e.g. freeways in San Francisco and Toronto, Manchester's rapid-transit system, and the redevelopment of Covent Garden in London. How did such projects ever get started? And how were they carried through in the face of oppositions or alternatively abandoned at a late stage? Neither here nor in the book can I develop a comprehensive, overarching model formulated in exact terms. The case studies are dealt with in tentative, impressionistic terms simply because each has its own special features, its own subtleties. Nevertheless, I believe that some general outlines do begin to emerge.

A location for uncertainty

One useful approach, though far from complete, is that of the three kinds of uncertainty in planning, developed by Friend and Jessop in their classic study of local government might (Friend and Jessop, 1969).

Uncertainty in the relevant planning environment covers everything out-side the immediate planning system. This is the conventional type of uncertainty, which

¹ This article first appeared in the *FUTURES Journal*, February, 1980. (Copyright 1980 IPC Business Press and reproduced here with permission.) At the date of this publication, Peter Hall was Professor of Geography and Head of the Department of Geography at the University of Reading in the UK. His book entitled *Great Planning Disasters*, published by the University of California Press *was* published soon after the publication of the FUTURES article from which it was derived.

expresses itself in bad forecasts of behaviour within the system that is being planned for. There are two notorious types of error. First, many planning disasters prove to have been based on bad forecasts of effective demand. We now know that the London motorway rings were originally planned on the basis of grossly inflated traffic forecasts; that the Bay Area Rapid Transit System in 1976 carried only 51 % of the forecast riders in that year; that Concorde assumed an impossibly high trajectory of demand for supersonic travel. Second, most of the examples I have studied demonstrate various degrees of cost escalation. In fact, research by Merewitz shows definitively that cost escalation is a fact of life for almost every major project." The real question is whether final costs fall above or below the magical average of about 1.55 times the original estimate. The Sydney Opera House (a 15-fold increase over 15 years) establishes some kind of record, though Concorde approaches it: the Bay Area scheme's escalation was modest in comparison.

However, uncertainty which at first appears 'environmental' often turns out, on closer inspection, really to belong to one of the two other types described by Friend and Jessop. Uncertainty in related decision areas refers to the fact that other people in other organisations, and even other parts of the same organisation, are making other decisions that may rebound on the decision in question. For example, Concorde's designers failed to take account of the US aircraft-manufacturers' development of wide-bodied jets, and of the effect this would have on airline economics; while in the remarkable case of Piccadilly Circus in London, the planners were failing to take account of decisions being made in other parts of the government machine concerning transport policies and regional development policies.

The third type of uncertainty, uncertainty in value systems, frequently emerges as the most significant of all. The London ring ways and the Covent Garden redevelopment were overthrown because mass opinion-or that part of mass opinion capable of registering its view-quite suddenly shifted in the late 1960s from high-technology, comprehensive solutions to incremental, managerial, conservationist ones. Concorde suffered greatly from the same shift, and from the associated new concern with energy conservation and the environment. It would have been difficult for any observer to predict this shift in the early 1960s but not impossible, since the key figures of the new movement were already writing and campaigning.

The reasons behind decisions

This theoretical explanation assumes that everyone works in a rational, disinterested world where-in a process of Athenian debate-the right decisions will eventually be taken. In practice, decisions are made by actual people who may have various motives. Graham Allison, in his account of the Cuban missile crisis of 1962, develops three alternative models to 'explain' the crisis.'

In the rational actor paradigm, the decision maker reaches a solution by analysing goals and objectives, setting out options, calculating the costs and benefits of each, and making the choice that gives maximal excess of benefits. But Allison has no difficulty in showing that this model fails to explain a great deal of what actually happened in the missile crisis.

The organisational process paradigm assumes that most behaviour results from established routines within organisations: the actors will be seeking to guard the interests of these organisations, and all change will be marginal and incremental. Allison argues that even this model fails to catch much of the observed behaviour. He therefore develops a third model, the governmental (bureaucratic) process paradigm,

which is based on the notion that government decision making results from conflict, compromise, and confusion among individuals whose behaviour must be understood in terms of game playing. Each person struggles for outcomes that advance his perception of national organisational, group, or even personal interest. Solutions represent immediate answers to problems, often with poor communication and limited understanding.

Interestingly, Allison's three models correspond to the basic philosophical and conceptual assumptions of different social sciences: the first to economics, the second to social psychology, and the third also to social psychology but at its interface with political science. No one model will explain all of reality; it is necessary to develop an eclectric theory that will embody different insights and different aspects.

I suggest that, in fact, planning decisions result from complex interactions among three groups of actors: the community '01' such members of the community as become actively involved; the bureaucrats and professionals within government; and the politician at every level of government. These groups have different objectives, different modes of organisation and operation, different perceptions of reality, and different degrees and kinds of power to shape events. It should not be assumed that anyone group is homogeneous: rather, it is likely to consist of subgroups and even of individuals with different, sometimes contrary-objectives and assumptions. Members of groups or subgroups engage in strategic behaviour to gain what they perceive as their objectives, Their power stems from a variety of sources including legal and institutional authority, reputation, bargaining skill, and acuteness of perception. They are bound by the rules of the game, which may range from the very formal to the very fluid. No outcome is ever completely decisive, since it can be reversed or it can wither away if not implemented.

This eclectic theory is derived largely from US work. In the USA a highly diverse body of remarkable thinkers, economists, political scientists, social psychologists, organisational analysts have developed the theory over a 30-year period. Much of this work has been paid relatively little heed in the UK, perhaps because it throws an embarrassing and uncomplimentary light on the processes of government.

In search of social justice

Analysis, through dissection, merely reveals the pathology of past decisions. Most decision makers, and most people affected by decisions, would presumably like something more: an attempt to suggest better rules for decision-making. Any such attempt, which will not be easy, must recognise the existence of all the constraints to rationality revealed by the pathology. My suggestions fall into two main groups: the first concerned with the art of forecasting, the second with the evaluation of different sets of consequences of alternative actions.

Better forecasting, I suggest, should at least recognise the three types of uncertainty described by Friend and Jessop. It should also recognise that apparent irrationality may in fact be uncertainty in related decision areas or in values. The heart of the problem will be to produce scenarios that show how events: technological, social, cultural, political will unfold and interrelate in the future. This is the stuff of history; it will need a good historian to capture it and to write history in reverse. Though conventional forecasting techniques-mathematical modelling, morphological analysis, cross-impact analysis-will provide an invaluable structure to the process, much decision making will be intuitive and judgemental.

Much less tractable is the development of a set of rules for combining allocative efficiency with social equity when judging the consequences of alternative actions. It is impossible to devise a true social welfare function that would permit a rational calculation of gains and losses to individuals. This fundamental problem has plagued some distinguished thinkers, but seems entirely to have escaped the attention of most professional planners, despite the fact that they should have been centrally concerned with it. 'Without such a function, it is clear that the vital evaluation stage in the planning process must be meaningless. Yet important work, by such thinkers as the Nobel prizewinner Kenneth Arrow, has shown the logical impossibility of devising one.' However, I believe that ways exist - not logically perfect, but perhaps workable out of the so called Arrow paradox.

The work of the Harvard philosopher John Rawls is particularly promising. He suggests that we can best devise a set of rules for achieving social justice by asking everyone to assume what he would want for himself if he did not know what he would achieve in life. In practice this proves to be a rule for a highly egalitarian distribution of goods and services within society. It also appears to move directly from the positive (how people actually would behave in certain circumstances) to the normative (how they ought to behave).

Such ideas, applied to the cases I have mentioned, might have helped produce smoother, more consistent decisions that would have evoked less criticism. Unpopular decisions might have been avoided by looking more systematically ahead at the changed environment in which they would have to work themselves out. A greater concern for distributional impacts might fundamentally have affected evaluations. But will all this help us to avoid further disasters in the years to come? Can we develop early warning systems?

Cars and planes: the dangers of delay

The 19808 may contain fewer pitfalls for the planner than the 1970s. Demographic and economic stagnation are likely to mean that there are fewer opportunities for such large-scale public projects as Concorde or the London motorways. Greater public involvement at every stage of the planning process may well ensure that every project receives fundamental criticism before it is agreed. But this, paradoxically, suggests that the planning disaster of the next decade may be the reverse of those in the two previous decades: the failure to take action in time to grapple with a problem.

Traffic and transport in London provides an obvious example. The abandonment of the motorway plans in 1973 was posited on a double-barrelled alternative: traffic management and restraint, plus development of public transport. In the event, the authorities have found it impossible to pursue either of these alternatives energetically. Traffic restraint has been frustrated by lack of effective enforcement while public-transport plans have suffered from limitations on public expenditure. The result, in the late 1970s, is that traffic delays in London are worsening to the point that they threaten to be as bad as in the early 1960s with the predictable result that before long, there will be another demand for extensive road building.

The continuing saga of the third London airport provides another illustration. At the time of writing (autumn 1979), yet another official investigation is expected soon to produce a firm proposal for a site out of a shortlist of four, three of which, ironically, were effectively also in the Roskill Commission's shortlist of four, in 1970. The announcement is bound to be greeted with outraged opposition from the population around the proposed site, and with demands for a public inquiry which could again as in

the Stansted case back in 1967 recommend against the proposal. Meanwhile, although future air-traffic forecasts have varied alarmingly over the 20-year life of the third airport controversy, it is almost certain that the capacity of the existing airports will be exhausted by the early 1990s, if not sooner (Shaw, 1979). The authorities, therefore, will either choose Stansted by default, as the only site capable of taking the load in reasonably short time, or there will be an acute shortage of space for scheduled and charter flights throughout much of the 1990s. One plausible outcome is that Stansted is chosen on these grounds and that this all along has been the objective of an alliance of the air interests. Whatever the outcome, many people will regard it either as a positive or as a negative disaster.

Disaster avoidance

In any controversial case, there are powerful interest groups with different perceptions of fact and of value. It is necessary to allow for this by discounting some of the statements made by any or all of such groups. One useful clue is to ask how far the existence of a group, subgroup, or individual within a group, depends on the success or overthrow of the particular proposal. This does not automatically mean that any such views are to be dismissed: it does meet that they should be critically interpreted in the light of the particular role and objectives of the organisation or the individual.

The present balance of forces will change, and not necessarily at a cons tar pace or even in the same direction. In struggles between powerful force' equilibrium is never more than temporary. The problem will be to try to war out the likely dialectical pattern of shifts in power and influence, relating the circumstances of the particular case to the general current of ideas and the balance of power between groups in society. It seems inevitable that the forces of economic development are going to gain strength as against, say, the forces representing environmental protection, though not the forces of energy conservation. But the meaning of the term economic development could profoundly change during the coming decade, as the conventional barrier between spare-time activity and working for money increasingly breaks down.

The next point is to realise that some cases are disasters virtually by definition. Any decision to build a new airport, or extend an existing one, or indeed to do nothing, is bound to produce bad results for some group or groups of people. There will be gainers and losers, and a first approximation is to choose: a solution offering a maximum balance of gains over losses. But this not the complete answer, since the distribution of those gains and loss, over different groups of the population may be equally important. It is not necessary that all these changes be recorded in the same units. As the experience of the Roskill cost-benefit analysis demonstrated, in the last resort that is impossible and an attempt to do so can be confusing. However, the effects should at any rate be listed and described, to provide the basis for informed judgement.

We should also develop a better sense of timing. A negative disaster can be said to have the virtue that even if time and money were spent, much was saved compared with the outcome of a positive disaster. That might suggest that for most public projects, the answer is to make haste slowly. But, as I have indicated, there can be costs in inaction too. The costs and benefits should I analysed at various points in the future, and should always be compared with doing nothing or, more accurately, doing the minimum. There is a time of doing very little, and a time when only positive, even unpopular, action will be right.

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GREAT PLANNING DISASTERS RE-VISITED: A 21st CENTURY PERSPECTIVE

Interview with Peter Hall conducted by Harry Dimitriou and Richard Oades all of University College London²

Sir Peter Hall was invited to look back to 1980 and his book *Great Planning Disasters* to comment on the lessons to be learned from it today and to reflect on the change and continuity in the intervening years that may have altered or reconfirmed his earlier conclusions, particularly as they relate to the subject matter of planning mega transport projects. The structure of the interview is based on selected leading themes and statements extracted from *Great Planning Disasters* considered to be of relevance to the VREF Smaller Project and the work of the OMEGA Centre at UCL.

You claim "some planning mistakes ... may be termed disasters" and that these fall into 'positive' and 'negative disasters'.

Question 1: When does a mistake become a disaster (both as perceived in your early work and today, if different)? What major planning disasters have occurred over the last 25 years? Are there any Great Planning Successes, and if so, to what would you attribute their success? Are all major planning decisions a greater or lesser failure?

PH Response: A mistake becomes a 'disaster' when it is perceived as a 'disaster'. There is also always the amplification of the media, which is something that is always present. Generally, it is when a project is seen as producing particularly large financial consequences. The cost escalates and/or all the estimates of the usefulness of the project turn out to be grossly inflated. This is something that has since been written extensively about by a Bengt Flyvbjerg (Flyvberg et al 2003).

There is the other case of a negative planning disaster where the project did not happen and it appears afterwards, to at least some, that it is a great mistake that it did not happen. The planning of the London airports is an example of this. As to what planning disasters have occurred over the last 25 years, one could cite the Millennium Dome as an example of a project that was initially seen as a disaster. Although it yet may indeed turn out to be a successful entertainment venture providing a new kind of focus within the Greenwich peninsula that is surely needed. The planning of the Olympics in London may be seen as a major planning disaster, but only time will tell.

Other disasters I can think of are: possibly schemes like the National Museum of popular music in Sheffield which was certainly a spectacular failure and which went out of business soon after it opened; there is also the Earth Centre in Doncaster which was a regeneration scheme we have almost forgotten now. As to planning successes, there is probably a host of them, the regeneration of the London Docklands has turned out as such. I think the Channel Tunnel Rail Link (CTRL) is likely to be a success though it remains to be seen whether it will reap the regeneration benefits that were one of the major reasons for starting the project in the first place.

As to abroad, I would cite a number of successes of strategic planning in cities like Paris and Madrid as mega project successes. Very often, you can attribute the

² The interview was held on 27th August, 2008 at University College London

success of these cities to advanced planning, generating a strategic master plan into which the bits fit. This should be stressed very heavily, particularly the integration of advanced transport projects and the associated development, which gives rise to local activity centres.

We should try and learn from both failures and success, although to judge failures we need a long-term perspective.

The question of "how did (large-scale) projects ever get started? And how were they carried through in the face of opposition ..." are two strategic questions you pose.

Question 2: Looking back 27 years, do you have significant new perspectives on the answers to these two very important questions to add here?

PH Response: If you are interested in how large scale projects get started, with special reference to the CTRL, there is a book which is going to be published in December 2007 which tells the story of an unusual small group of people in a private company (Arups) which decided to challenge all the conventional wisdom and all the conventional power forces that embodied that wisdom in government and the then British rail by proposing a different route for the rail link to London and finally won. This got started through some people who must have been very self-confident, or very arrogant, or maybe slightly crazy, or all three. They decided that they were going to try their luck with this. The book, by Nicholas Faith (Faith, 2007), explains how they carried this through in the face of opposition. It shows that the opposition to their idea was absolutely massive because British Rail didn't want to listen - right up to the very top echelons of the organisation. Bob Reed (of British Rail), and the Department of Transport didn't want to hear because it trusted everything to British Rail. What really happened was the opposition to the BR proposals to their project until it was politically so huge that government had to take notice (of the opposition) because of the massive demolitions which were to be involved in South East London. This coupled with the arrival of Michael Heseltine led to a fundamental re-examination of the line in the summer of 1991, and the ultimate adoption of the Arup route.

You *cannot* overestimate the importance of a single individual, I would go so far as to argue that if Michael Heseltine had never arrived at the Department of Environment in the autumn of 1990 then the Arup line would have *never* gone through, and maybe no line would have gone through and you would have had a negative planning disaster.

I am tempted to say also that the regeneration of Manchester is another example. Here you have a rather similar situation which has been highlighted by the obituaries of Anthony Wilson over the last couple of weeks. The regeneration of Manchester was essentially started by some really quite mad people, and that's why Manchester became known as Madchester in those years. They were crazy young people, completely outside the establishment, who decided to launch new music venues, often in the face of opposition from the police, because you had a very conservative police force in Manchester at the time and even City Council. This group of people almost hijacked the city council over the years. The regeneration was aided by the decision around 1986 to designate central Manchester as any UDC (Urban Development Corporation), which triggered very large scale redevelopment in the ring of warehouses all around the city centre. This process had actually begun before

Indeed, it was very important that the city had essentially decided to back cultural regeneration very early on, on the basis of the success of Tony Wilson and other people, and by realising that this was a very promising way of turning around the city. This is well documented in a new book by John Montgomery (Montgomery, 2007) who certainly tells some very interesting stories, including that one. In a way, the opposition came from more conservative politicians, but Manchester has had a history of being extremely pragmatic and flexible, and seizing chances when they occur. This is in part due to a combination of very smart politicians and very smart top officials, and that has been a tradition going back now 20 years. The politicians who were originally opposed to the development Corporation agreed they would take it onboard because anything causing something to happen in Manchester is good for Manchester. It was this pragmatic approach on the part of Labour politicians at the time, when in other authorities there had been virulent opposition in councils such as Southwark in London. I think this was a clue to Manchester's huge success in turning itself around from a totally clapped-out industrial city to a hugely successful service city for the North of England.

You usefully employed Friend and Jessop's model of three types of uncertainty in your great planning disasters analysis.

Question 3: Has there been contemporary literature/research that has significantly advanced your work? Would you have used another (underlying) model today if you re-visited the same area of study? If not, what model(s) would you have employed and why?

PH Response: I haven't worked in this area except very peripherally and in a rather dilettante way since writing the book, so I don't really know. I would be surprised if there weren't, but it is an oddity of Jessop's work that it inspired virtually no school, no imitations, no big literature that I know of. It is almost as if it dropped into the deep sea and disappeared. I found this extremely puzzling although I think there are interesting reasons in the history of ideas. This is the time of the Marxist ascendancy in urban studies as in everything else and I think their insights just got completely buried under the Marxist onslaught, and they very much demand reappraisal.

I think that of the different types of 'uncertainty' you can see that 'uncertainty in values' is still terribly relevant. Look for instance at the huge rise of the environmental movement and particularly its impact on thinking about transport, which is still going on, and this is absolutely bound to have an impact for instance in the way we judge transport investments, although this is still working its way through. Uncertainty in the area of the planning environment is massive because we see especially through the work of Flyvbjerg the tremendous uncertainty and, as he would argue, significant distortion of the basic project projections and forecasts made. This is still an absolutely unresolved area in planning large projects because it can give rise to a position where it is very difficult, if not impossible, to argue for a very large range of projects which could be of great significance.

This is related to the third key area which is uncertainty and related decision areas. The problem here I think is perhaps the most complex of them all because

there has been a tremendous explosion in urban regeneration projects.³ This was taking place worldwide and was associated with huge economic restructuring of cities. The problem here is that investments in transport find their final justification in their indirect effects on promoting regeneration. It proves very difficult indeed, and perhaps some would argue impossible, to gauge those effects; that was certainly the case when I was directly involved with the Channel Tunnel rail link in the summer of 1991. We had two consultants' studies by Pyder (on behalf of British Rail) and by Victor Haussmann Associates (on behalf of the London Borough of Newham) which read totally different, even contradictory conclusions; both in effect suiting what the client wanted to hear. That just demonstrates of course this uncertainty in related decision areas. No one in the summer of 1991 could have remotely thought that a relevant factor when planning the rail link would be that we were bidding the 2012 Olympics, although in effect it appears the existence of the rail link was perhaps a key factor in bringing the Olympics to London for good or ill. This is just an illustration and I would stay with that uncertainty model I used because I think its usefulness is far from completely worked out. It is basically not touched.

You link uncertainty to the generation of errors and explain that two "notorious types of error" include "bad forecasts of effective demand" and "various degrees of cost escalation". You then go on to argue that "uncertainty which at first appears 'environmental' often turns outreally to belong to one of the other two types described by Friend and Jessop" thereby suggesting the issue of uncertainty can often be generated by decisions outside the project that may rebound on decisions within.

Question 4: Has this lesson/observation been understood by today's government policy-makers and planners, and politicians? If so what evidence is there of this? If not, what has prevented this very important lesson from being taken on board? Is it better understood by private infrastructure investors and developers?

PH Response: Well no, Bengt Flyvbjerg shows that it hasn't and that this continues although it could be that now we are getting much better at dealing with both forecasts of demand and cost escalation. Partly due to that work, however, one does have to have regard for the fact that not all forecasts proved wrong in either respect. Channel Tunnel Rail Link proved very good on cost, it is going to come in on time and on budget, at least as far as I understand. It proved very bad on forecasts of demand for reasons associated with the related decision areas (i.e. no one) and although I was in the middle of it at that point I had any inkling of the impact which was coming from the low-cost airlines in taking away virtually all of the projected growth in discretionary induced traffic on the new line.

Some of that might come back in the fullness of time if the global warming debate leads to increasing restrictions on air travel, especially low-cost air travel, which I should have thought, not immediately but in the medium term, to be a very likely outcome. That will be another illustration that you cannot easily gauge these indirect effects except over a relatively long timescale.

³ These have loomed much larger since I wrote the book. The term 'urban regeneration', incidentally, was hardly ever used in 1981, although perhaps something which was really urban regeneration was happening under another name.

As to whether this is better understood by private infrastructure investors and developers - I'm really not sure. I keep talking about the Channel Tunnel Railway because I happen to know it best but that was taken on board by London & Continental in a competition and I'm afraid even there they failed to project accurately. They accepted the existing projections, everybody else took them on faith, it was the basis of the bid that everyone made and they very rapidly proved to be wrong as people observed the early growth or lack of growth of the Eurostar traffic after the service opened on the old line from 1994 onwards.

I'm not sure if private infrastructure investors (and developers) understand this any better. Another example, which is very recent and very topical, is this country's catastrophic failure of the Metronet Company, in charge of the rather larger part of the infrastructure maintenance and upgrade on the London Underground. It is very clear that when they bid for the contract, and won it, they had no idea of their likely costs. The fact that the parent companies which included some of the most experienced private companies in the world in this area of infrastructure planning, construction and maintenance, only backed them for £350 million and the cost rapidly rose to £1 billion is an illustration of how everybody got it fundamentally wrong. I think that could be a classic, and will be a classic study of the complete failure of the private sector to get it right. In this sense I think the same problems which plagues the public sector also plagues the private sector because they proved *not* to be that differentiated in many of these projects; such is the close relationship.

You mention "uncertainty in value systems" and make the point that this "frequently emerges as the most significant of all". You cite the shift in the late 1960s from high tech and comprehensive solutions to incremental managerial conservationist ones to illustrate this.

Question 5: We in our research have concluded (quite early on) that very often "context is everything" - where context may be identified by dimensions of time, space, government, ideology, culture. All are seen by us to have a potentially critical bearing on the character of uncertainty, the interpretation of uncertainty and the value given to uncertainty. Your views on the importance of context in decision making for large scale projects in terms of today's fast changing globalised world would be most welcome.

HTD: One of the major observations which I thought your book came out with was the fact that the context of these projects, i.e., the environment in which they had evolved and emerged had changed so dramatically that they themselves had affected the success or failure of those projects. You have concentrated your response so far on the forecast side but how about the changing of the context?

PH Response: I think it is terribly important, and even in relation to the CTRL, what I was trying to argue was that the rise of the low-cost airlines and the new environmental agenda were two critical changes in the environment (context) which were not foreseen, and in fact work in opposite directions, so their combined contradictory effect is not yet fully been worked through. In relation to other projects, clearly if you have a project which is seen as an integral part of a larger project (e.g. a new transport connection such as the Humber Bridge) associated with major urban development and if that associated project fails to happen, it will destroy much of the

case for the investment in the first place. Because unlike the first Severn Bridge, which was a parallel investment made at that time, or perhaps the Forth Road Bridge, could be cited as the third major bridge crossing of that period. The problem with the Humber Bridge is that it didn't really go from anywhere to anywhere, or rather it went from a port city (which was declining), to a almost non-places on the other side (that is Grimsby Cleethorpes and Scunthorpe). There is just nothing there really to justify the construction of a bridge of that scale unless you postulated a huge new growth area, and the idea of creating a growth area there was probably extremely fanciful, in the first instance because there was not the economic base for such an area. Hull has been a struggling city for years, Grimsby Cleethorpes, likewise, Immingham is a ferry port which in itself does not generate huge amount of urban development. So in a sense it was a highly fanciful scheme like the Tee-side Scheme which was being worked up at the same time and also did not get anywhere. The Tee-side Scheme, however, didn't involve such huge public investment. There was a time in the late 60s when growth was in the air and there were all kinds of fancy schemes being cooked up by the Regional Planning Councils (which were the early equivalent of today's Regional Development Agencies). I'm afraid that some of these just proved to be a bit half-baked. Therefore, you do have to look at these two things together. justification for which is seen as helping promote very large-scale development is especially relevant to any transport investment. In a similar more modest ways, the development of the Super Tram in Sheffield really failed to generate the kind of growth in the Don Valley which they had hoped for.

HTD: Your views on the importance of context in decision making in terms of a today's fast changing globalised world would be most welcome. The fast changing world raises uncertainties and fast changing unpredictability. A response from you would be useful in terms of if the context, the London Plan, is world market-driven does this actually a) call for different skills? highlight uncertainty? Is risk greater if the financial global markets collapse? Are we going to see major implications for London?

PH Response: Let me answer this in the London context. I think you can postulate that (1) the Economic cycles have always been with us and always will. They are endemic to capitalism. People like Schumpeter tried to argue that they have a regular periodicity and I don't think he was that far out. We are undoubtedly due to come to the end of a very long upswing in the economy pretty soon. This will cause big corrections and undoubtedly cause a degree of implosion of economic structures that have been put on top of the wealth that has been generated especially by, but not exclusively, the financial and businesses services sector. If that declines severely, as it probably will, you will have a knock-on effect all throughout the economy ranging from Porsche sales rooms to extremely expensive restaurants to real estate to everything else, and it will correct over time. This can also have an effect on the appraisal to public projects because you can bet your bottom dollar that if this happens the Treasury will be waiting to say we don't need Crossrail; put it on the back-burner again, as they did in 1995. That just illustrates that you do have to take a very long-term view.

When Manuel Castells and I were writing the book on 'technopoles' which we published in 1994, one of the main conclusions we reached was that the Japanese were willing to stay with projects through *a very long time*, whereas everybody else would have just run away. Some of those technopoles were not expected to work, but

they stayed with them. You really must *not* try to make projections on the basis of the conditions at one point of time; you must somehow take an average.

You highlight the myth of the rational decision making paradigm/state and comment: "In practice decisions are made by actual people who may have various motives". You then cite Graham Allison's "governmental (bureaucratic) process paradigm, which is based on the notion that government decision-making results from conflict, compromise, and confusion among individuals whose behaviour must be understood in terms of game playing".

Question 6: Given the above: (1) why is it technocrats (planners in particular,) and sometimes the media also, do not accept that the rational planning process is a myth? (2) What has changed since 1980 for this myth to be refuted? (3) Has the notion, for example, of collaborative planning made some headway in reinstating rational planning and if so, what has been the track record of collaborative planning and partnership initiatives in the UK in overcoming/resolving conflicts? (4) And, does the Allison paradigm which acknowledges conflict, compromise and confusion among decision making, equally apply to the private sector both in relation to its dealing with government and to other major private sector stakeholders?

PH Response: Well I think the answer I give overall is that I'm not sure that that much has changed. It is still true, and will always be true that bureaucracies have their own value systems, their own *esprit de corps*, their own ways of doing things, their own thought waves, their own structures of thinking and evaluation. They will be very resistant to anything which is "not invented here", which is the story of British Rail in the relation to rail link.

One interesting question is whether transport planning in London is being rather badly messed up because you have in effect three different agencies: (1) Transport for London which at least fairly well integrated, (2) National Rail which now divides into the transport operating companies but more importantly Network Rail, and (3) the rather strange ad-hoc hybrid authority which is trying to plan Crossrail. I think the fact that Crossrail has been put on the backburner once again while the Thames Link project (which has been somewhat delayed), is now fully going ahead reflects the great clout of Network Rail, as well as the fact that there is a rational economic case in terms of the cost benefit ratio.

I think it very much matters as to how we structure bureaucracies. For instance, at times in the UK we have tried to integrate land use planning and transport planning, and then always Transport has broken away because the transport people hate being buried under the planning bureaucracy as they feel it doesn't give them freedom. It is interesting that every time they have broken away, it has been associated with the weakening of the enthusiasm for rail projects, and the re-assertion of the powers of the highway engineers. Rightly or wrongly, this tends to happen.

Whether collaborative planning has in fact made any difference in the UK, I would be somewhat doubtful. I think what has happened in this country is that the Treasury has acquired more and more power since I wrote my *Planning Disasters* book. The Treasury shadows each department very closely and by the political process of regularly shuttling politicians through Treasury to give them Treasury thought waves. It then shuttles them out again to run home-departments. You will find the 'dead hand' of the Treasury has almost becomes' internalized', as may now

be happening with the Department of Transport. Now, when I refer to the 'dead hand' of the Treasury, while it may be correct that you have responsibility not to waste large sums of public money, think this can give rise to a situation where you never take any risks whatsoever on major projects which do involve this integration between a transport project and the associated developmental. So high-speed rail is put on the backburner by the Department of Transport because they can't see any case for faster trains ignoring the fact that these trains could psychologically have a major impact on the development along the route in/on which they run is not takewn into account. The new German high-speed line between Cologne, Bonn and Frankfurt has produced an explosion of development in Montabaur (a small town halfway along the line) because all of the financial services are crowding into there, and this was a station that owes it existence purely to political pressure in the German federal system. Yet it has had this rather unexpected effect - in only about three years of opening. I think this does illustrate that a new investment can trigger development impact and I don't think that the Treasury's way of handling this is adequate; I think it may be almost non-existent.

As to the question about whether this applies to the private sector, well it depends on the private sector's business. Going back, transport projects 100 years ago had a considerable degree of integration in the private sector of transport and development projects. You had, for example, *Metroland* in London created by the Metropolitan Railway Surplus Lands Company. On a much larger scale you had big developers in America such as in Boston, or on a huge scale in Los Angeles with the Henry Huntington Empire, and in Japan the private railways in Tokyo and Osaka in particular. They integrated the process of building new rail to in effect create development values along the new lines so most of the money was made out of the real estate. We have not done much of that.

It is interesting that when London Transport took over the Metropolitan Railway after a struggle in 1933 they did not follow with the Metropolitan Railway pattern, they actually developed the lines but did not profit from the development. They were told not to, as it was part of the structure created under Herbert Morrison. That is a question worthy of further exploration because it does relate somewhat indirectly to the current debate which is raging here on how best to claw back land value uplift in relation to paying for infrastructure.

Whether you go through the planning gain supplement or the Milton Keynes roof tax (which is a much more direct scheme) which has been used to directly finance particular infrastructure like the Bedford Western bypass these are rather small-scale examples. Section 106 contributions can be used that way directly to kick back into infrastructure necessary to serve new developments like Northstowe in Cambridge. There is a whole raft of issues here that are worth examining, about the relation between what is largely now private development of new homes and associated services, in effect the creation of new communities, and the transport infrastructure necessary to make those communities work. That is a very live issue at the moment for the UK government.

HTD: Can I just ask you to accentuate decision-making of the kind that presumes conflicts, compromise in confusion? This is extremely important for our work because if this is so well known and accepted by political scientist and public administrator then why is it that technocrats, engineers, planners and even the press continually give the impression that there is rationality that does not involve mistakes, or conflicts. Are we seeing two strands of thinking that haven't really come together?

Or is that there is an intention to use the rationality as camouflage and business goes on as usual with conflict and confusion?

PH Response: Governments, whether they are democratic or less democratic will always present a good news story (as we know from the notorious case of the Joan Moore Story). They will always maintain that they are tremendously integrated, tremendously rational, and tremendously efficient - that's what governments do. One has to go behind the screen, however, to find out the truth. What we do know is that fights occur all the time in government, particularly between departments, and it matters here very much how departments are structured.

I gave the example of the coupling and then uncoupling of planning development issues from transport issues in this country. Another example would be who takes control of the environmental agenda which has been basically yanked out and most of it put in a department stressing competitiveness, rather than a department stressing environment, which means a down-grading of a lot of projects.

I come back to this point that there is a rationality or a serious of rationalities going on here and one can't underestimated the degree to which civil servants (even within departments), have particular 'ways of doing things'. What struck me forcibly from my short time in what was then DoE, now DCLG, was how very different the kind of 'urban' agenda was from the 'planning' agenda.

What the planning people did was write planning papers (basically bureaucratic papers) about how to control the development process. The urban people were much more concerned with big regeneration projects, but there was very little read-across between the two sides, even between departments. Certainly, the way things are done in the Treasury is that it is dependent on a set of extremely well honed rules about value for money produced through cost benefit analysis and progressive modifications which are then closed down like a very rigid template on the work of all other departments. There is rationality here, just as there is a different kind of rationality in the work that civil servants do in CLG, but it is different. An exclusive emphasis on the value for money may give rise to a kind of narrow cheese-paring mentality which doesn't really allow for the possibility of major interventions (and prokjects?). That would be my concern.

HTD: The point I'm trying to highlight here is that if we take Alison's assumption which seems to be very practical then why are we surprised with higher degrees of uncertainty, and not getting it exactly right because by highlighting the role of compromise, confusion and conflict (as we know from the military field), uncertainty in terms of who is going to win and lose is at the centre of the way you plan. Whereas, if you adopt a rationalist approach, the uncertainty is artificially moved to the periphery of this process because the assumption is that the sequence is going to be as the process suggests.

PH Response: I find it difficult to answer that question, there is obviously an interesting parallel between the military and the kinds of activities that you are essentially interested in your project. The similarity often has to do with *where* to place resources and now we are seeing the tremendous fight going on with resources to be applied to Iraq. That's almost a done deal, we are pulling out of Iraq and the resources are going to Afghanistan. If you read the stories there were similar, huge battles in World War II between efforts to put resources into the Mediterranean theatre versus launching a second front, D-Day; these really racked the Allies. There

were similar battles about the amount of resources to be devoted to bombing German cities versus a land war. I think these kinds of choices will always be endemic. They are to do with strategy and strategic decisions.

HTD: We were interested in this stage of the treatment of risk complexity and uncertainty in decision-making, so the question returned to here is if we were to take Alison's approach then uncertainty and risk-taking, and indeed complexity, is at the centre and is the focus. However, if you look at the rational, even collaborative planning process - which tries to minimize conflict - the assumption of uncertainty and risk is downplayed incredibly so.

PH Response: To come back to that point it is probably a fault in our planning education because it is not really reflected in the outside world. And if you have, or are involved in, preparation of projects and project appraisal you'll pretty well see that risk and uncertainty figure very largely in that. It is a box to be ticked and it is taken very seriously and I can think of project I am involved in at Blackpool, which is a living landmarks proposal for lottery funds of 50 million. Risk is coming up as important in the final stages of the proposal and this is again is the hand of the Treasury so it is being incorporated in there, but whether it is being incorporated in the right way is difficult to say. What it give rise to is the tendency to go for something which is safe - risk aversion.

HTD: You cited strategic planning earlier on as is the process that links uncertainty, risk and complexity although the planning education seems to be comforted by urban design emphasis, by development control, strategic planning education is almost dead.

PH Response: To do ourselves credit we have tried but we haven't got very far. I remember being involved with this in the early stages when we found that students didn't come. We are always terribly subject to the vagaries of fashion and we assume that the students have got their ears to the ground and know what the drums are beating out there but I'm not sure that they always do. The problem is therefore, and I have worried about this, may be structure of our education is poorly adapted to the work that students will find themselves doing because if they don't understand this kind of stuff they are going to be thrown into it because they will live in a Treasury-driven world.

You explain that the power of project stakeholders (including government) "stems from a variety of sources including legal and institutional authority, reputation, bargaining skill, and acuteness of perception. They are, you go onto to argue, "...bound by the rules of the game, which may range from the very formal to the very fluid".

Question 7: The Economist (2005, pp3-4) recently argued that effective intervention by Government in the market place relies on "an understanding by the public sector of how capitalism best works to serve the public good" and that this understanding appears to be not only in short supply but also sometimes downright false. The same source goes on to explain that the private sector serves the public good only if certain of its conditions are met. In your opinion, have the visionary and regulative frameworks for large scale projects in the UK become more formal, stronger and

more influential than at the time when you wrote your Planning Disasters book, or less?

PH Response: This is a very difficult question indeed I think. The fundamental point is that private companies are there to make money and serve their shareholders. Most of them might be good guys and they might want to do good things and certainly don't want to do bad things but at the end of the day it is the *bottom line* which is going to be the criteria by which they are judged.

The key to working with the private sector is how to harness their search for profit in the public interest. This, after all, is directly underpinning the huge change that has come over since I wrote this book whereby so much "public" activity is now handled by the private sector through PFIs and similar schemes, including developments like the private sector academies in the education sector and the huge interventions in the national health.

I think that that has become much larger over nearly 30 years because of the simple fact that since Thatcher there is this belief that the private sector is better and in some sense more efficient at doing these things than the public sector. I have earlier suggested that that isn't always the case, the collapse of Railtrack and the collapse of Metronet indicates that even very big private companies can be almost unbelievably incompetent. They couldn't have been many more incompetent companies than Railtrack. If you look at its history, it is difficult to believe that it was anything other than a 'bad dream'. Of course, the truth is that private sector companies can be very badly run and large private sector companies can crash and/or are taken-over because the supply of this kind of talent in the fast-moving world is limited, and they are not all up to it. That is capitalism! That is what Schumpeter referred to as *creative destruction*. It creates acute problems when these private sector companies are delivering a major public job. Who sees that the tube train on the rails next Monday morning at 5.30 in the morning?

HTD: The same is happening with our global financial system. The big banks are being stabilized by the national banks.

PH Response: What is happening in the financial world is quite bizarre. What has been happening is a system of gambling on risk created by people who thought they understood what they were doing, so they have been hiring the top mathematicians from Cambridge and Harvard into the banks to create these quantitative models which have now gone completely belly-up because they were obviously based on 'garbage in - garbage out'.

HTD: What I have understood to happen is basically like musical chairs, they have been passing risk on until somebody gets landed with the unfortunate package. More recently, the idea was let's kick risk into the grass, so far away as it gets lost into the jungle. However, so many parties have been kicking risk into the air now that the air has become so polluted that it affects everyone. Risk is no longer concentrated in parcels which have been passed from one partner to another but has begun to accumulate and affect everyone.

PH Response: Risk is been buried in these complicated models in such a way that it disappears, and has then been sold on. These actions are based on the assumption that the Central Banks would *always* bail them out, hence all these references now to the

"Greenspan Put". The Greenspan Put meant that when you finally went belly-up Alan Greenspan would bail you out. We now see Greenspan's successor bailing them out again, and there was a wonderful letter yesterday where somebody wrote what the Bank did in stabilising the market last week was the equivalent of a host at a party where everybody had got drunk and started a fight giving them all another round of drinks to quieten them down.

You wrote that "Analysis, through dissection, merely reveals the pathology of past decisions" and that ".... Most people affected by decisions, would presumably like something more: an attempt to suggest better rules for decision making which ... must recognise the existence of all the constraints to rationality revealed by the pathology", covering among other things "the art of forecasting" and "the evaluation of different sets of consequences of alternative actions".

Question 8: Why was so little research of this kind pursued since the time of your publication of your Planning Disasters book, and why has no systematic major post-construction evaluations been undertaken or funded in the UK, by either government or other mega project stakeholders, including financial institutions? This is particularly strange given that these projects are becoming increasingly costly, complex and significant in terms of their potential positive and negative impacts?

PH Response: The answer may be that the book came out at the wrong time; it was published at the onset of the Reagan /Thatcher era when there was a tremendous attack on the whole concept of strategic planning. We all remember that famous or notorious White Paper of 1983 which presaged the abolition of the GLC when the government said 'the creation of the GLC was a reflection of the fashion of strategic planning in the 1960s which has now passed'. I suppose in a way a call for a better kind of planning was not something that influential people wanted here in 1981 because the market was going to do it all. They set the market free and bingo they would sort it.

Now we have come through this, I think it is interesting that Bengt Flyvbjerg had a tremendous success with his book because there are a lot of numbers in it which economist like and people in the Treasury Departments like, and my book didn't have that. I think the failure of my book to have an influence, apart from the political climate, related to the fact that it was half stories of a higher journalism type. A half attempt to probe a lot into a concept of public choice economics which people found difficult, so it didn't fire them. Whereas, Bent Flyvbjerg comes along with all the numbers and found that consultants lie and all the forecasts are wrong, and that rings big bells! This had an impact coming about at a time when treasury departments are trying to get their hands on big public projects because at this point they don't quite know what to do with them.

HTD: A large proportion or a majority of the numbers that Flyvbjerg quoted were in fact from the developing world so there was a mixture data from very different contexts which was not picked up. The numbers came out as more important than the context, which is probably wrong.

PH Response: That is interesting because people are busy and or lazy and don't always pick up these details. They don't pick up the message in the book but the

message in the reviews of the book (or the newspaper articles where the reviewer himself has only half understood it so they are not always getting the flavour).

HTD: Projects are becoming more costly and complex and significant in terms of potential positive and negative impact. It is actually true? Have passed projects been just as complex for their time and just as costly for their?

PH Response: I don't really know the answer; it would be interesting to run some numbers. My suspicion is there hasn't been that much difference if you compare like with like if you believe in any concept of economic cycles. Simon Kuznets reviewing Schumpeter said he thought that basically there was something like a 20 year property cycle (Kuznets 1940) and maybe that's true and maybe not but no one can deny that there are big waves were a lot gets done and then periods where not much gets done. In a period when a lot gets done (Montgomery, 2007) you get a lot of investment which can be in some areas public and some areas private. If you consider the investment in public transport that took place in this city between say 1880 when the Circle line was being completed through the city of London and 1987 when the last of the great Edwardian Tube lines was opened it was astonishing. The amount of investment which was pumped into or under the city was unparalleled; we have never succeeded in doing anything like it since. A little later New York and Paris did the same kind of thing; I think there were proportionally much bigger investments made at that time. You know the big cities of the developing world have always limped way behind the cities of the developed world in the degree and quality of their public Shanghai for instance is now catching up in a big way but if you go to Latin America you get cities like Santiago de Chile or San Paulo with minimal metro systems for populations of up to 18 million people. I think this is partly because we have somehow over the 20th-century lost the kind of quality that caused investment to pour into those other cities. It could be that they did so through naiveté but a lot of what we've got was a result of ill judged investments by investors who you lost their shirts. Certainly the completion of the Circle line was a disaster to the shareholders because it was a nightmare, imagine digging a trench through the city of London which you were doing in the 1880s. It was held up for years, the story is in Barker and Robin's history of London transport (Barker and Robbins 1963, 232-237).

You argued the "heart of injecting a sense of social justice into the decision making for the planning of large projects is "to produce scenarios that show how events – technological, social, cultural, and political – will unfold and interrelate in the future". You go on to claim "This is the stuff of history; it will need a good historian to capture it and write history in reverse".

Question 9: Do you still subscribe to this approach? Why did scenario planning fall out of favour in planning (for mega project planning in particular)? And does social justice matter any more if we are obliged (as we are told) that developments are ultimately to be decided by the markets and global competitive forces?

PH Response: I still really believe that storytelling and scenario writing is a not bad way of providing a context for strategic planning. Unless you have some concept of alternative development paths and unless you can sort out these different periodicities of the short run, medium run and long run, you don't know where you're going. This

is partly because people tend to be obsessed by relatively short run chops through the development and trade cycle. I would therefore argue very fervently for continuation of that approach. However, it has fallen out of fashion partly because of the belief that you could leave it all to the market. But you then come back full circuit Circle, does the market understand this any better? I recall long ago, in the 1960s and even on into the 1970s, Shell was terribly keen on scenario writing and they were a very good company. Other companies at that time believed in this kind of long-run approach because they wanted to know where their investments were going in a risky world, they were a global company if any was.

HTD: McKinsey's have actually picked this up in terms of what makes the corporate world sustainable in this globalised world and they have come up with looking at short-term, medium term and long-term horizons as critical to success, why did it fall out of favour?

PH Response: You can never over-estimate the effect of what can be called political fashion which is partly related to the movement of ideas as exaggerated by key individuals. I think it was true in this country, and perhaps in the US, that there was a feeling of tremendous disillusion in the 1970s which was a very bad decade in this country - with the outcome of large scale public intervention. The country seemed to be going down the tubes. The Welfare State had become almost ossified and the unions were tremendously powerful. The notion that, however simplistic, you could simply breakthrough all this and scrap it, almost a Maoist approach in early Thatcherism, and leave it to the private sector like C19th century capitalism, was being argued with great passion by people like Alfred Sherman and his Centre for Policy Studies. They never stopped arguing it and they finally triumphed, and in some respects they seem to have made it work. But then some of the longer run complications and questions began to emerge. We have seen through some mistakes of privatization, particularly on the railways, you could make mistakes even in the private sector. An important point to reiterate here is that the private sector is involved in delivering vital public services. It is not exactly like a situation where you don't like your mobile phone service so you switch from Vodafone to 02 and vice versa or you can get on a railway and they'll kill you, or less spectacularly, the trains fail to run. These are serious issues.

HTD: And does social justice matter any more if we are obliged (as we are told) that developments are ultimately to be decided by the markets and global competitive forces?

PH Response: Here we get into a very fundamental political debate because the essence of New Labour, and certainly the Brownian version of new Labour, is that yes social justice matters hugely but the best way to deliver social justice is to harness the private sector in the interests of social justice agenda or the social democratic agenda. The jury to some degree is still out on this. No one would doubt that capitalism is brilliant at delivering a lot of very diverse goods and services, but the question that still remains, is one of the key questions for your whole study: to what degree can it deliver the whole of these? To pose it almost as a reduction ad absurdum no one has yet proposed privatising the universities, although they might, why not? The public sector is more and more being subsidised by benefactions. That began in California in the 1980s where the University of California was increasingly

born up on the alums contributions but that's a detail. It still remains that the University of California is fundamentally an independent public institution. It is an important model but there is no reason why somebody should say does this have to happen? Could this be delivered more efficiently by incentivising all of us to make money?

You claimed "It seems inevitable that the forces of economic development are going to gain strength as against, say, the forces representing environmental protection, though not forces of energy conservation. But the meaning of the term economic development could profoundly change during the coming decade" (and beyond).

Question 10: Given that your prediction has come about - to what extent do you perceive the new emerging (sustainable) vision(s) of economic development will change the nature of large scale projects? What types of such projects are likely to receive priority and how are they to be judged a success or failure?

PH Response: I'm surprised I said it twenty seven years ago. I think that the real problem here, and I'm going to state the blindingly obvious again, is that economic development is widely seen by politicians and others as being key to everything else. I must say having reflected on this for many years, I always come back to the same answer: there is no substitute for economic development. If you don't have it almost everyone remains of poor, or rather a few people remain sort of rich by their standards although not really rich by the standards we accept. And the vast majority remain so miserably poor as to imagine if their life is worth living (if you go back to the Middle Ages or to any time in pre-industrial England, or even in some parts of in Africa today). This is their survival.

It is economic growth which has taken us from those conditions to the extraordinary degree of affluence we see in any advance country today, it is a tremendous achievement. That is why people like Gordon Brown are absolutely right in saying there is no substitute. You have to place it at the forefront because it is politically the growth that allows you to do redistribution, if everyone's getting richer you can push the income distribution a certain direction but if they're not getting richer everybody starts screaming so that is crucial.

With specific reference to the environment, the problem here is that it has been very difficult to present the environment in a similar way to the considerations for which Treasury officials, in any country (and in particular this country), represent as crucial because it has been difficult to put numbers on it. That's why I think the Stern Report commissioned by Gordon Brown was so important because he for the first time put a lot of numbers on to the climate change agenda. I won't say there has been much action but at least we have the ability to conduct a debate in the same way as energy conservation can be quantified because you can easily see that there is a payoff of insulating people's homes.

I feel the environmental debate is only still in its infancy because these peak mind shifts to take time and we haven't had that long in which climate change has been an issue so it could take at least another 10 to 20 years before there will be a big change and policies will be adopted as they already are in Germany. Germany, and perhaps one or two other countries like Austria, seems to be way in advance of us in this area and this is why our relative failure is becoming positively embarrassing. We

are going to fail to meet our own targets by a long way because the government is proving politically incapable of action, unless there is tremendous shift in a very short run because we are talking about targets which are going to have to be met within 30 years. There are occasionally countries that do prove to be incredibly smart in advance of the pack, and in some ways the Germans have often proved to be this, particularly in their recognition of environmental issues.

HTD: Climate change has made the notion of complexity and the acceptance that you can't put numbers on everything before you can make a decision to take action much more acceptable. The climate change challenge means you cannot tackle one issue without making reference to another and the whole interrelationship has become part of the focus and that has led to governments having to change in the 21st century old ways of looking at interrelated problems.

PH Response: I believe that until very recently the big problem was you had two very different mindsets, two very different thought ways. One was the thought way of the economists which has always been the language of the trade-off and the other was that of the environmentalist which has been very fundamentalist, in away saying there are absolute standards which you *cannot* gain say because we would destroy the planet. These have been very difficult to reconcile in any kind of intellectual discourse even at the highest levels of government. I think the great achievement, therefore, of the Stern Report was to translate a fundamentalist approach into an economist approach where you are capable of beginning to inject numbers into the decision-making. In practice, given the way government works and given the way the private sector is related to government, it is always going to be very difficult to persuade the other side of the validity of the environmental arguments *unless* you begin to conduct the argument in their own terms. Now that seems a bit extreme and you may want to differ.

HTD: David Pearce began this a long time ago and Stern is rather a follow-up, is he not?

PH Response: I think we are going to see a lot more, basically if you take Mr O'Leary as an extreme example of everything and he says 'I'm going to fly my planes for 1p whenever you lot say' the only way you're going to deal with Mr O'Leary is to say yes but we're going to charge everyone £100 every time they want to travel on one of your planes and the reason is here.

You made reference to the need to "develop a better sense of timing" and that the generic advice to government and mega project stakeholders "is to make haste slowly" given that there are costs of inaction and wrong actions. You conclude by advising "There is a time for doing nothing — or, more accurately, doing the minimum. There is (also) a time for doing very little, and a time when only positive — even unpopular — action will be right".

Question 11: Given the advice above, how would you translate this into today's circumstances – say in your response to the recent Planning White Paper and the Governments proposal to set up an Independent Commission of Experts to "speedup" nationally significant infrastructure projects?

PH Response: There is a case for developing a kind of anticipatory mixed scanning approach to planning where you develop these long-term scenarios and you say, for instance, we believe that there would be a case for a new high-speed rail line, HS2 as they are now calling it, between London and the North but we do *not* believe that this is necessary now. We think it might be necessary between say 2015 and 2025. We are not quite sure when because it would depend on economic cycles and the demand on that point but we are safeguarding the route and we are saying to potential developers that eventually that line will be built and you can begin to invest in key points along it but in the meanwhile pausing until the time is right.

This can give rise to difficulty and planning blight as you can see for instant that platform 13/14 at Paddington station is falling to bits because it is waiting for Crossrail but that can be dealt with intelligently by saying there would also need to be a short-term maintenance programme to keep infrastructure in order, and a lick of paint would come in handy on platform 13 and 14 before pieces of wood start falling on passengers. It can also be that you can do 'adaptive planning' in the sense that you can do certain things in the expectation that you are going to eventually have this development. For instance it appears that Network Rail have dropped the reconstruction at Paddington station which is the centre of the whole Paddington development because they don't know what's happening to Crossrail. It should be possible to reconstruct Paddington station on the basis that it is a good idea, Crossrail or no Crossrail! You've got to therefore develop a rather complex pattern in terms of a critical time part in order to allow these slippages whilst maintaining some kind of robustness in the whole process.

HTD: You advised to make haste slowly. In terms of the planning White Paper recently published and the recommendation focusing on the independent commission of experts, and the emphasis on speeding up nationally significant projects, how much of your advice of 1980 would you now change and how much remains the same?

PH Response: I am a rather firm believer of the notion of national infrastructure planning. I was an adviser to the Hetherington Commission which the TCPA setup and which reported last May and recommended that we should have a national spatial development strategy for England, similar to the one every single place has got including the rest of UK now. I think this independent commission goes some way towards this, although it doesn't exactly because as usual the devil is in the detail.

If you read the proposals they are a mixture of the reasonable and the absolutely pernicious; the pernicious being that they want to chop up the infrastructure into different bits so you have different decisions made on airports and different decisions made on rail without apparently the need to cross reference. The Commission even says (in a wonderful sentence that someone slipped in) that the Airports White Paper of 2003 will become part of the new strategy so we're going to have the third runway at Heathrow (by the way). They won't get away with that because too many people will make a song and dance about that but again the devil is in the detail, it is buried. In a sense, what you need is an Independent Planning Commission to say, as a first step, here is our national infrastructure strategy we think that the next 20 to 25 years requires. We are not going to do it all tomorrow but we are going to return to bits of this when relevant and that would involve a saying what to do with the next stage in the London airport planning process.

The problem we have at present is that we have an incrementalist approach so

that long-term thinking is entirely dodged so you can get the absolute farce, and it would be a farce if it wasn't so obnoxious, of BAA lying to the inspector of the T5 enquiry saying we're never going to build a third runway when they knew dam well the T5 would work without a third runway and it excepts their argument which is absolute rubbish based on the fact that everyone is going to fly on A380s within five years time and of course it does work does it. The evidence is rather the reverse that people are going to fly on smaller planes rather than larger ones.

HTD: A lot of the White Paper talks about speeding-up decisions, and your advice is to 'make haste slowly', do you want to comment?

PH Response: I don't think there is any contradiction, I think that once you do have to make a decision it can be made a lot faster. Everyone I know, apart from the lawyers, is agreed that you should never have a T5 enquiry again; Lawyers spend days and days reading out statements that everyone is capable of reading because they are being paid by the hour, which was just a farce. As a matter of fact, I think for all its deficiencies the EIP procedure which has come in and has now been given the force of law in the 2000 Act for the regional spatial strategy is a good way of taking decisions quickly. You could argue that it is a bit too fast in some cases and there are some issues there which are being raised by people about who gets invited but something close to the EIP procedure, with decisions not dominated by thousands of lawyers but by a rational process before an independent panel, a kind of civilised conversation, is surely the way to do this. It is the terms of reference for that commission which I think have not been sorted out at all. Is that commission going to take a decision on a third runway at Heathrow? Is it going to take a decision on the future of the London airports? Is it going to take a decision on the future of the airport system of the UK, is it going to take a decision on airports in relation to highspeed rail travel? These are the critical questions.

HTD: In our work in looking at concepts of risk, uncertainty and complexity, we very soon came to the importance of context. From context we then moved into the 'tipping point' of ideas and then we moved into 'the power rhetoric and trust'. We have found relationships between issues which we didn't quite expect.

PH Response: I could talk about the trust issue; I think it is a very difficult one as I said earlier. Bureaucracies have agendas and the Department for Transport, as their name suggests, want more transport. Basically that's what they do and it is still possible even with such a department to ask questions about how much transport and what kind of transport, which in a way they said they were going to try and get Eddington to answer. It is a bit whimsical I think to ask someone who spends his life in (1) a country with a residual railway system around the principle cities which is totally dependent on air travel (Australia) and (2) in the Far East (Hong Kong) which is also likewise dependent on air travel and has a residual rail system to deliver a blueprint on the future of transport in the UK. You might say the people who hired him knew what to expect. Anyway it is quite obvious that there is in major aviation interests there and one of the things we do not understand is the degree to which this kind of lobbying and almost institutionalised lobbying, relationships between sections of departments is all pervasive, in creating a mindset which then affects decisions. One cannot overestimate the impact of what I call 'the quasi-informed business sector'. I am always amused, and I was amused again when they all trooped in to see

Tony Blair on one of his last appearances at breakfast and said 'we must have Crossrail, we the business sector of London must have the Crossrail now'. There was no suggestion as to 'we' the business community of London are going to pay for it. They had a cup of coffee and then got shown out again, all this stuff about 'we must have a first class airport system in London', Heathrow must be fixed. There is no suggestion that the answer might be to do something else than fix Heathrow. There is this incessant pressure on a lot of people, a sort of rent a crowd of top business leaders who go into these Number 10 breakfasts and blastoff, and they do have an impact unfortunately.

HTD: The Hutton Report has actually brought the term 'independent commission enquiry' into great disrepute. It almost immediately now triggers a question of trust when you hear the word independent because of the track record of the (mis) use of the term. There is only one step further than that which is - if it is not independent because of the cynicism then this gives - the license to the opponents to move into guerrilla tactics on the environmental front.

PH Response: What has been happening at Heathrow is interesting because the process has been extremely well controlled and well handled except that I think the impact could have been even more smartly handled. The real risk with this kind of protest is that it is seen as loonies jumping out of trees and that is exactly what you do not want, you want an environmental campaign which is based on solid evidence and that is what they were careful to do.

HTD: Just go back to a previous discussion, if you read the new statesman, the article on the road fix, what is so depressing is that you can have very articulate breaking down and presentation of rational arguments that somehow do not penetrate further than the first tier of the media. In other words the clarity of the arguments are out there but somehow is not seen the light of day.

PH Response: I have to say here is that one of the problems is that our media is not very good in my view, of course that makes me sound like an old fogy which I suppose I am at 75 but the quality of the media in some respects has gone down. Forty years ago you had absolutely top correspondents like Terence Bendix and Meyer Hillman covering these things who were really expert, so-much-so that they went off and wrote books afterwards. Now stories are often handled by reporters who don't seem to know anything about anything and basically they just buy press releases and reproduce them. You really need a kind of journalism which penetrates; you get other journalists who are better but are essentially sensationalist like Simon Jenkins who basically sets up Aunt Sallys and then knocks them down for entertainment and in all this you get very little real hard examination of issues.

In a talk in Germany (I believe), subsequent to the publication of both the book and the Futures article, you stated: "just as the 1960's were the golden age of positive planning disasters, so, so it seems, the 1980s threaten to be the leaden age of negative disasters ... (and that) there is a real risk that issues may simply get recycled, with no resolution". You then gave several new problems warranting urgent attention and called for the avoidance of a new generation of planning disasters.

Question 12: Following on from the categorization of the 1960s and 1980s given above, how would you describe the 1970s and the 1990s? (I presume the categorisations are UK-specific), and what are the major new generation of planning disasters to avoid in the 21st Century?

PH Response: It again goes back to the notion of cycles, in fact there were some big things happening whether you call the disasters or not in the UK, for instance the London Docklands and all the other pieces of urban regeneration in Britain. It's always going to be true that you are going to have bursts of activity at periods of growth when people say something has to be "done" about this and periods of recession in which the Treasury or any Treasury anywhere will say we don't really need this, forget it for the time being.

So you get the recycling of decisions I describe and the history of the scheme like Crossrail, which I certainly would put into a new addition of great planning disasters at number one. It is a wonderful illustration of this because it has been around a very long time. I guess it started in the late 80s; its immediate genesis was the Central London Rail Study of about 1990. It was dropped by the Treasury in the mid-1990s and then re-surfaced again about four or five years ago when the planning team got serious again. But it causes you to ask: (1) if we had done this more rationally shouldn't we have decided all that time ago (2) whether there is a case to do this (3) where should this railway go - because it has changed its direction several times and (4) how is that associated with paying for it (because the question of where it goes is intimately associated with paying for it) which I do not think has be adequately examined.

HTD: You called the 60s the golden year, what you call the 70s in the 90s?

PH Response: The 70s were a period of nothing happening, negative recycling, the London Docklands was a classic case where nothing happened. It may be partly political I think that Labour administrations are more inclined to go in for a lot of consultation and committees, and committees on committees and Tory administrations are inclined to go more for a kind of quick-fix approach; there was certainly the contrast in Docklands between the whole of the 1970s.

HTD: So you're implying that the quick-fix approach we're now seeing new Labour taking is parallel to the path of the Tory party agenda?

PH Response: Not quite because if you look at the history of the Thames Gateway there is a wonderful quotation from Michael Heseltine which essentially says that for the whole of the 70s they set up all these committees, and committees on committees, and even committees on committees and nothing ever got done. He just swept that all away and created a body to do it - and we did it. The 1990s were positive again because of both sides of the great crash of around 1990 when Canary Wharf went belly-up, as soon as Canary Wharf started coming back again the development of London Docklands gained pace, particularly in the mid to late 1990s. And the pressure to do development in the East Thames corridor grew and grew. You would have had the Channel Tunnel rail link go through, despite it went belly up spectacularly in 98 and it had to be rescued by government with this strange formula.

HTD: Is there major new generation of planning disasters to avoid in the 21st century?

PH Response: The way to do this I would insist is to go ahead with long-term planning and then to implement, probably after a reality check, which hopefully wouldn't be too serious unless there were major changes in the parameters. In fact in a funny way the emergent solution to CTRL was that. I remember Andrew Turnbull, who was in charge at the Department, phoned me and said what would I do? And I said stage it and eventually they did. I am sure I wasn't the only voice, but by staging it they actually managed to get a lot of bang for the buck early on when they opened two thirds of the line, and the passenger numbers had gone up and they created a very favourable atmosphere for the final phase in November. That is the way you can do quite a lot as long as you know what the long-term plan is, but it means that - whether it is an airport or a high-speed rail system or anything else - you must know what you want to achieve in 50 years, even if some of it might take 50 years to do. So it's 'visioning' in strategic thinking which we are so poor at, putting the model through and the whole history of Heathrow is a classic example.

Finally, Complexity Theory has emerged strongly over the last 25 years in a variety of sectors and disciplines. The failure to understand and cope with complexity is acknowledged in your *Planning Disasters* book as a major source of uncertainty in decision-making for major projects. The theory stresses unpredictability of outcomes and emergent order as core characteristics of complex systems.

Question 13: To what extent do you consider that Complexity Theory explains certain planning disasters and what does the better understanding of both complexity and Complexity Theory offer urban and regional planners and infrastructure planners in their search for more effective decision-making in the planning of future mega projects?

PH Response: I think I'm going to chicken out on this one. I haven't really followed Complexity Theory, and consequently, I don't know what the answer is. It may be very valuable but as you say it hasn't been applied and the question would have to be why it hasn't? Is it that it is too complex and too difficult for the average planner, is it because too few people have got into it? The total planning academic profession is now very small, it is much smaller than it used to be, how many are there in the whole country? If we added-up all the faculties of all the remaining Planning Schools, and then you take into account that not all of them rate as research institutions, how much research is being done? How much can you do? I don't know the answer. It may be that there are tremendously big insights here and that one ought to be going to ESRC for funding to look at the possible implications of this.

HTD: Interestingly enough Volvo Research and Education Foundations have from the outset been interested in the whole issue of complexity, before we came along with a project, so in that regard they have seen something that others haven't. I suppose that the spirit behind this question actually is: if our current toolbox for the 20th century is not going to be useful for 21^{st} problems, and if we seek from other spheres, other disciplines, other professions alternative solutions - dipping into

Complexity Theory to make better sense of emerging orders may well be helpful. If we continue to look for the key under the lamppost we are *not* going to find a solution to open the door to effectively tackle 21st-century problems. The research institutions you cite are very disappointing because they take *so long* to approve anything. They are, furthermore, full of people with peer review values that are self reinforcing and are so much into safeguarding their own interests that at the end of the day you need to have blue sky thinking which they typically do not sponsor.

PH Response: That's also my experience, very often these funding bodies are terribly locked into institution paradigms. I had a dreadful experience in Brussels, the European Commission have put a lot of money into the new European Research Council and I was asked to be one of the members of their advisory groups for our area. It is, however, totally dominated by economists, and they agreed they would change the structure next year so that decisions in our area are not affected by economist saying this is not economic. This is underlines the point you are making. The ESRC, going back years, is always trying to escape this by setting up these programmes which are cross-cutting but they don't always work that way because of the process of peer review; they are always going to be judged by people who are going to sniff and say this isn't good economics.

HTD: I would just like to conclude that what we have done is come back to the topic we accidentally stumbled across: the contagious, or lack of contagious, nature of certain ideas, of how certain ideas tip into and others just die. There are signs that the economist paradigm (as all powerful) is beginning to die but then that may be wishful thinking.

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