

PART A : THE PROGRAMME OF ANALYTICAL SOCIOLOGY

1.0 THE CURRENT STATE OF SOCIOLOGY AND THE OBJECTIVE OF ANALYTICAL SOCIOLOGY

1.1 *Same old same old....*

In 1979, Hubert Blalock used his Presidential Address to the American Sociological Association (Blalock 1979) to launch a jeremiad against the sociological profession of his day for its failure to address fundamental questions of conceptualisation and measurement. Rather than take these tricky and complex issues on, the profession seemed to be deliberately sidestepping and ignoring them. This had led to a situation where

....in many respects we seem badly divided into a myriad of theoretical and methodological schools that tend to oversimplify each other's positions, that fail to make careful conceptual distinctions, and that encourage partisan attacks. (Blalock op cit p. 881)

Using Robert Merton as his exemplar, Blalock's prescription was for the discipline to recognise the trouble it was in, to accept the challenge in undertaking the serious work of detailed conceptual and methodological development and, coming together with a sense of common purpose, step by slow step, gradually put sociology on a firm, empirically and conceptual robust footing. If it did not do these things, Blalock warned

.....I fear that sociology in the year 2000 will be no more advanced than it is today, though perhaps it will contain far more specializations, theoretical schools, methodological cults, and interest groups than, even today, we can readily imagine. (ibid p 894).

Almost 20 years later, James A. Davis used the same platform to offer his own equally scathing analysis.

What is wrong is that Sociology is incoherent. It does not cohere ("to stick together; be united; hold fast, as parts of the same mass"). While each article/book/course may be well crafted, they have little or nothing to do with each other. They may share methods and even data sets (and grammatical voices so passive as to suggest a drug problem), but each is about a unique problem with a unique set of variables.

Try this test: list the key concepts/variables in each article of in the last two or three issues of the American Journal of Sociology, American Sociological Review, or Social Forces. I expect the number of different variables will be at least 20 times the

number of articles and few variables (save for a handful of demographics such age, sex and race) will turn up in more than one article.

Another indicator: List the major subfields of sociology. Then try to arrange them in some pattern that has more intellectual bite than alphabetization. Hard, isn't it?

Yet another: Why are there no conflicts over priority in Sociology? Because sociologists are nice? Nope. Because no two sociologists ever study the same thing, so such conflicts are impossible (Davis, 1994, p 180).

The year 2000 has come and long gone and no doubt, were he still alive, Blalock would feel his warnings have gone unheeded and his gloomy prognostications realised. Certainly there is no doubt that, to-day, Davis could repeat his charge word for word since so little has changed in the meanwhile. The distinguishing feature of sociology remains a deep lack of consensus on how to make progress in the discipline. No theoretical constructions have universal or even near universal support. There is no consensus on the methodological programmes definitive of the research practice of the discipline. No broad based cadre of studies generating a cumulative body of knowledge is to be found. All around is difference and dissent.

By and large, responses to this condition take the same forms they always have. Either there is a Tybalt-like cursing of all dominant modes or, as with Blalock and Davis, there are strident exhortations to adopt the *modus operandi* of synthesis and integration and rally around some favoured version of one of the current contending schools.

1.2 Analytical Sociology to the rescue?

AS shares the views of Blalock and Davis, though it tends to be somewhat less condemnatory in its phrasing. It too sees sociology exhibiting disarray. Here are the opening words of *Dissecting the Social*, Peter Hedstrom's (2005) initial survey of the possibility which AS offers.

Over the past several decades leading sociologists in Europe and in the United States have expressed strong reservations about the explanatory power of sociological theory and researchThey are concerned that much sociological theory has evolved into a form of metatheorizing without any specific empirical referents, and that much empirical sociological research has developed into a rather shallow form of variable analysis with only limited explanatory power. The main message of this book is that a path must be hewn between the eclectic empiricism of variable based sociology and the often vacuous writings of the 'grand' social theorists. (Op. Cit. p 1.)

Hedstrom is very clear how this path is to be hewn out.

(T)he advancement of social theory calls for an analytical approach that systematically seeks to explicate the social mechanisms that generate and explain observed associations between events.....In the case of sociology.....a sustained focus on explanatory social mechanisms would allow sociological theory to reconnect with what we consider to be its most promising and productive era —

namely, middle range sociology of the kind that Robert Merton and Paul Lazarsfeldt tried to develop....(Hedstrom & Swedberg 1998 p. 1)

Middle range theorising is to be the salvation of sociology. Yet this is no new and different modality but a synthesis of the best of what we already have (which to judge from the quotation above, is not much). The aim is to consolidate around tested principles and facilitate piecemeal development in theory and explanation. This unification will take place in two ways. There will be a unification of theory and investigation. Theory will become empirically grounded. There will also be a synthesis within theory, with the rival theoretical frameworks being integrated into a unified field. Pierre Demeulenaere puts it like this.

Analytical sociology should not therefore be seen as a manifesto for one particular way of doing sociology as compared with others, but as an effort to clarify ("analytically") theoretical and epistemological principles which underlie any satisfactory way of doing sociology (and, in fact, any sociology)..... The aim of analytical sociology is to clarify the basic epistemological, theoretical and methodological principles fundamental to the development of sound description and explanation. (Demeulenaere 2011 p. 1)

These are challenging objectives, albeit expressed somewhat *sotto voce*. Achieving the clarity of principles Demeulenaere is asking for and then implementing them as an operationalisable methodology for sociology will be neither easy nor straightforward. But only if AS can achieve the latter, will the value of the former be realised.

In this monograph, we will look at the challenges AS has set itself and the way that it has set about overcoming them. Our focus will be on the robustness of the principles which have been and are being adopted and the feasibility of basing an empirically grounded investigative programme on them. We will also look at some of the studies claiming to demonstrate this possibility. Our purpose is to examine the *methodology* of AS. Because this term has come to have a somewhat different usage in sociology to that which we intend, it is worth spending a few moments at the start explaining what we mean by it.

1.3 Methodology and the logic of sociology

We want to distinguish between methodology and method; or between methodology and methodologies. Following Felix Kaufmann (1958), we take methodology to be the study of the logic of an investigative discipline. Methods or methodologies are the techniques which might be employed to undertake such investigations. Investigation might, as in logic or mathematics, take the form of testing of the validity of a set of inferences derived from a set of premises and axioms. Or it might, as with empirically driven disciplines, be the testing of theoretical propositions against evidence. We are not here concerned with philosophical questions concerning the security of deductive or inductive inference. Nor are we concerned to legislate that sociology should only conform to one or other. Philosophers of science and sociology have long struggled with these issues. For the moment, we simply acknowledge the (seemingly unending) debates and take it as a

matter of fact³ that sociology aspires to be a body of theory and empirical investigations. The methodology of sociology is simply how that theory and those investigations are aligned so that the theory actually motivates the investigations and the investigations actually provide evidence (positive or negative) for the theory. Of course, 'alignment' is a weasel-word. We sociologists are adept at finding some connection, some alignment between a theory and an investigation whose results we want to argue are relevant to the theory. So specifying *some* connection is not enough. The diatribes of Blalock, Davis are really about just how easy it is in sociology to make some connection between a set of findings and whatever theory we like. For sociology to be a robust discipline, its methodology must contain requirements that rule out loose connectivity. There must be clear, defensible and strict rules by which we can step from theory to investigation to findings and back again. Those rules will specify the logic being followed. If AS wishes to be successful in, first, achieving the integrations that it has set its sights on and, second, re-starting progress towards constructing a discipline that can stand comparison to the physical and natural sciences, then it will have to forge its own methodology.

Adapting some of James Woodward's (2003) recommendations, we suggest that a robust methodology for an investigative sociology should demonstrate the following virtues:

1. The investigations carried out under the methodology should provide adequate descriptions; that is, capture the paradigmatic features of social life which members of the society experience.
2. If the sociology proposes to integrate a variety of alternative theories, it should show how that integration is to be achieved whilst preserving the integrity of each theory and the coherence of the whole.
3. The methodology adopted should allow us to evaluate which investigations and explanations are effective and which ineffective, which good and which poor. One of the anxieties noted by Schweder and Fiske (1983) over a quarter of a century ago was the discipline's inability to enforce standards, not just over quality but of how to distinguish non-science and nonsense from genuine contribution.
4. The methodology must have secure enough epistemological underpinnings to license the investigative approaches adopted. That is, the methodology must provide for robust and effective investigative methods.

Our question in this monograph is simple: 'How far does AS' methodology satisfy these criteria?' Although this is a question of prime importance, a positive answer may only be available over the long term. This is because, as well as pulling theorising together into a common framework and marshalling investigative methods so that the findings of studies will cumulate, AS has to find a way of preventing itself being paralysed by having to deal with arguments in the philosophy of the social sciences. To do that, it will have to find a way of either

³ Whatever *that* means!

answering those arguments or of generating the confidence to ignore them.⁴ A negative answer, however, may be arrived at in shorter order and, if it is, might well encourage AS to reflect on what else it needs to do to realise its goals.

2.0 THEORETICAL PRINCIPLES

2.1 *The metaphysics of agency and structure*

The objects of sociological enquiry, its phenomena, are the structures and institutions produced by patterns of social action. These structures and institutions are the intended and unintended consequences of such patterns. In so far as the behaviour of individuals is a topic for sociology, it is always set within some micro or macro patterning. Typical examples of macro structures as such things as the economy or the state. For micro structures, they are face to face groups, individual families, work teams and dyads. It is important to understand that the macro-micro distinction is a definitional binary not the end states of a spectrum or continuum of structures and organisations where some might be 'macro cum micro' or 'micro cum macro'. The ontology of sociology is, then, one of individuals and structures where the latter are either macro or micro. This ontology generally appears as the explanatory pairing of structure and agency.

The agency/structure pairing is the conventional metaphysics for most sociological theory. Modes of theorising are defined in terms of where they place explanatory weight. True, some, do seek to reconcile individuals and structures (as with Giddens' (1984) notorious theory of "structuration" and, as we will see in a moment, with AS' middle range theorising). But by and large, the texts and the summaries of theory present sociology as divided. Whilst AS (and Giddens) want to synthesise bi-polar explanations, they do not want to reject the ontology they rely on. In the sociological world there are only macro and the micro structures and individuals. When individuals do feature in the sociological world, they do so as members of micro structures and/or macro structures. They are individuals-in-a-structure not individuals *qua* individuals. Thus explanations which invoke individuals are explanations in terms of social-individuals-in-a- social-structure. This corollary of the macro-micro stipulation, that individuals are individuals-in-a-social-structure is what, for most sociology at least, prevents explanations in terms of individual agency collapsing into psychological explanations in terms of the desires, wants and needs of individuals. This axiom of sociality will become important later in our discussion.

AS does not question the ontology of the individual-macro/micro pair. But it does see that accepting it could force an explanatory choice. AS tries to avoid making that choice by adopting the twin principles of 'structural individualism' and 'supervenience'. Structural individualism is the *methodological principle* that all explanations in sociology are to be couched solely in terms of the agency of individual social actors. There is only one source of causal efficacy for sociological phenomena and that is the action of individuals. It is a version of the broader principle of methodological individualism. Supervenience is an attempt to avoid the

⁴ It was, we think, Murray Gell-Man who observed that he could think of no advance in the physical sciences that had been helped (let alone stimulated) by debates in the philosophy of science.

explanatory difficulties faced by theories that want to invoke linked conceptual bundles such as 'individual self interest' and the institution of a 'social contract' or 'rational choice' and the operation of 'the hidden hand of markets' in order to allow structural patterns to emerge from individual action but not be caused by them. The relationship between micro-structures and macro-structures is not causal but constitutive or emergent. The combination of the two principles is designed to place joint explanatory weight across both macro and micro without being reductionist or causalist.

It is crucial to be clear what AS is saying here. The only causal agents in social life are individuals.⁵ Individuals act together in micro structures. These structures can bring about (causal) changes in other micro structures. Such micro-foundations constitute macro-structures as parts to a whole. As a consequence, the chain of causal effects at the micro level produces supervenient changes in the macro order. This is what is called the "Coleman boat" in the AS and related literature.⁶ The causal path of change in the macro order is through the micro order which is then articulated at the macro level. This is captured by the following diagram taken from Hedstrom & Bearman's (2009) introduction to the *Handbook of Analytical Sociology*.

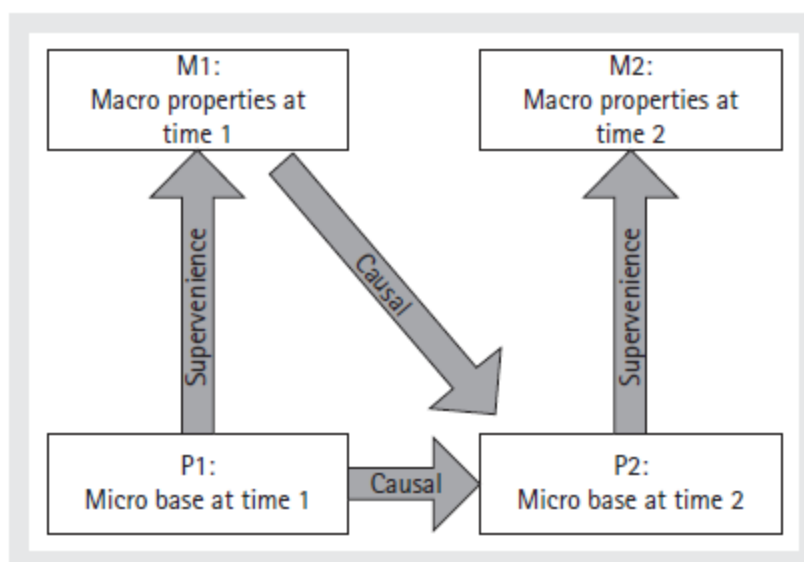


Fig. 1.2 Macro dynamics from a supervenience perspective

2.2 Epistemology and social reality

When we look around the social world, we don't 'see' structures and organisations. We see people doing things, either on their own or with others — driving cars, buying jewelry, going to school, talking to their children. For AS, any causal or other sociological explanation of these doings cannot simply be a listing of who did what, when and where. To cast explanations at this level would be to embrace crude empiricism. AS insists

⁵ It will be important to understand what AS means by 'individuals' and what is entailed in tracing causes at an individual level. Given the complexity of social life in even the simplest societies, tracing the causal paths at the level of particular individuals will be quite a challenge. If AS means 'individual-as-a-social-type' then we have to confront the methodological question of how we go from actual individual actions to the actions of (ideal?) types.

⁶ This wasn't actually invented by Coleman. See Barbera (2006) fn15

that through a process of abstraction we must dissect the complex totality of social experience by abstracting out immaterial or irrelevant features. This is what theories do. They reduce and abstract.

Developing explanatory theory involves a delicate balance between realism and abstraction. Although it is difficult to specify a priori what should be considered a sufficiently faithful representation of a social process, the question is of fundamental importance. Explanatory theories can never be based on fictitious accounts, because such accounts cannot provide convincing answers to the question of why we observe what we observe. What must be aimed for is 'analytical realism'..... (Hedstrom 2005 p 3)

The term 'analytic realism' was coined by Talcott Parsons. Here is how Parsons defines this position.

....it is maintained that at least some of the general concepts of science are not fictional but adequately "grasp" aspects of the objective external world.....hence the position here taken is, in an epistemological sense, realistic.....These concepts correspond not to concrete phenomena, but to elements in them which are analytically separable from other elements. There is no implication that the value of any one element, or even of all of those included in any one logically coherent system is completely descriptive of any concrete thing or event. (Parsons. 1949 p 730)

Theoretical terms are organising categories which enable sociology to analyse social life through a process of abstraction. Since it is not possible to carry out analysis without such categories, they are apodictic. The mapping between the concept and the social world is taken as given. We cannot interrogate the social world to see if there are structures and organisations. Rather, the presumption of structures and organisations is what enables us to provide sociological explanations.

This is not the place to tease apart Parsons' notion of analytic realism and the interpretation of Kant on which it is based. Suffice it to say, first, that it is far from accepted that, despite his heroic efforts, Kant actually did solve the problems of empiricism; and, second, that the version of Kant which Parsons calls upon will actually stand the strain he puts it under. However, having adopted analytic realism, AS has quite clearly set itself a challenge. The process of dissection and abstraction runs two risks: over-abstraction and a loss of groundedness in the detail of social reality on the one hand, and on the other a lack of generalisability because of the account is overly grounded in empirical detail. How much abstraction should we aim for? How much detail do we need? The challenge to AS is how to determine how to answer these questions.

2.3 Structural Individualism and semantic symmetry

We can readily enough grant AS the right to choose its own premises. We can happily allow it to proceed on the basis that theories must aspire to be "analytically real" and all explanations of social facts must be couched in terms of the actions of individuals, and then see what that standpoint delivers. However, if the principles are to be *principles*, they must be applied in a coherent and consistent manner, and the difficulties which they might generate addressed. For structural individualism, the problems arise in the rules for re-writing

descriptions of macro phenomena (societies, groups, markets etc) first into micro phenomena (families, teams, groups) and then into descriptions of individual action which can be re-transformed back into explanations of aggregate phenomena. This two-way path is needed because AS wants to aggregate individual actions into social structures and thereby gain explanatory access to effects which are invisible when viewed from the individual point of view. To use one of Thomas Schelling's examples (see below), summing over the preferences of all individuals for housing choice, you do not find racial discrimination. However, over time, extreme racial segregation emerges from the actions of all the individuals making decisions based upon their own preferences. The question is not whether the processes in any particular housing area could have been different. There is no way to run the time line backwards to get to the original state because of the *other* consequences which follow from the emerging pattern of behaviour. These are such consequences as changes in employment patterns, education, value of housing stock and so on. This, then, raises the question whether you can re-write descriptions of the phenomena observed at the aggregate level into the disaggregated level *and retain the properties/characteristics* which you are trying to explain, or at least whether you can do this in a way which is reasonably plausible for an actual case. To take another example we will look at in detail later, that of romantic attachment among adolescents (Bearman et al 2004). The spanning tree network describing these relationships is (only??) rationalisable in terms a social norm which says 'Don't go out with the prior girlfriend of your prior girlfriend's current boyfriend'. However, summing over all expressed preferences for their romantic partners of the young people, this formulation is invisible. Moreover, it doesn't decompose into any of the norms which they were actually orienting to. How then is its descriptive, let alone explanatory, basis to be grounded? At what level of meaning are we going to locate its *explanatory force*?

2.4 Emergence, the synecdoche problem and the mystery of supervenience

Emergence is an ontological category not an explanatory one. Properties are observable (or emerge) at one analytic level but are not observable at or reducible to another, usually lower, one. The familiar examples are the translucence and liquidity of water between 32° C and 100° C. The molecules of hydrogen and oxygen which make up water are not translucent or liquid within this temperature range. A description of the properties of the separate gas molecules will not be a description of the properties of water as a combination of the molecules. In sociology, it is conventional to define social institutions, structures and organisations as emergent from the actions of individuals and groups.

Philosophers use 'supervenience' to explain the relationships between orders of emergent properties and their constituent elements without needing to invoke causation. For example, discussions of the relationship between mental properties or states and physical properties and states, suggest that mental properties supervene on physical ones but are not caused by them. Or again in regard to moral discussions, moral properties (being right, being better) are held to supervene on natural ones (being human, or dense or made of green cheese). In both cases, supervenience only points to necessary correlation: "No A properties without B properties"; no mental properties without physical ones; no moral properties without natural ones. If we are not to take supervenience to be a causal relationship of some kind (that is, if 'to constitute' is not to

be taken as a causal verb), just how do causally deep explanations couched in terms of structural individualism account for supervenient relationships?

In the case of the mental and the physical, the proponents of supervenience argue that while specific states and processes in the brain are necessary for us to have memories, thoughts, weigh options and so on, those states and processes do not determine our memories, thoughts and choices. This disjunction is required for there to be philosophically defensible concept of personal agency. However, whilst it offers a relatively neat solution to the problem of how to relate the concepts of the mental and the physical, it does so at the price of leaving the actual, empirical connection between them a mystery.

AS wants to say that macrostructures supervene on micro ones; microstructures are necessary for macrostructures. This is an assertion about the correlation of two (analytically real) categories. Here is how Hedstrom and Bearman describe supervenience between micro and macro structures.

*.....a macro property, **M**, supervenes on a set of micro-level properties, **P**, if identity in **P** necessarily implies identity in **M**. If the macro property is supervenient upon the micro it means that, if two collectivities or societies are identical to one another in terms of their micro-level properties, then their macro-level properties also will be identical. It also implies that two collectivities that differ in their macro-level properties will necessarily differ in their micro-level properties as well. But it does not imply that two collectivities with an identical macro-level property will necessarily have identical microlevel properties, because identical macro-level properties can be brought about in different ways.*

*Although macro is dependent upon micro, micro-to-macro or **P-to-M** relations should not be viewed as causal relations. Macro properties are always instantiated at the same time as the micro properties upon which they supervene, and a group or a society has the macro properties it has in virtue of the properties and relations of its micro-level entities. The micro-to-macro relationship is a parts-to-a-whole relationship rather than cause-to-an-effect relationship. For example, if a set of dyadic relations exists between the members of a group, these dyadic relations do not cause the network structure linking the individuals to one another; they constitute it. Similarly, the properties of the individuals residing in different spatial locations do not cause the extent of residential segregation; they constitute it. (Hedstrom and Bearman 2009 pp10-11)*

We are now faced with two problems. First, given explanatory supervenience, what does the objective of offering explanations with "causal depth" mean? Hedstrom and Bearman define causal depth as:

By causal depth we mean the explicit identification of the microfoundations, or the social cogs and wheels, through which the social facts to be explained are brought about. The central cogs and wheels of social life are actions and relations. Actions are important because all the things that interest us as sociologists are the intended or unintended outcomes of individuals' actions. Individuals' actions typically are oriented towards others, and therefore relations to others are central when it comes to explaining why individuals do what they do. In addition.... social

relations are central for explaining why, acting as they do, individuals bring about the social outcomes they do. That relations are important for explaining outcomes does not mean that they are independent of individuals and their actions, however. As emphasized above, in principle all relational structures are explainable as intended or unintended outcomes of individuals' action.....

Causal depth is achieved by recognizing that action takes place in social structures that in this case channel mobility opportunities and thereby explain why we observe what we observe. (ibid p 9)

If we cannot say that the properties of macro structures are caused by the properties of micro structures, what does it mean to say that we want to identify the microfoundations through which social facts observable at the macro level "are brought about"? Moreover, in that they talk about these explanations as causally deep and not 'superveniently deep' ones, presumably we are to assume that Hedstrom and Bearman want us to think of this "bringing about" as causal.

The second issue has to do with what is called the synecdoche problem; how to separate the meaning of constitutive parts and wholes. If we are to divide a pie among four children, the four quarters constitute the pie. Ontologically, do we have four pieces of pie *and* a pie in four pieces? While the pieces do constitute the pie, each piece only gets its sense and identity from being part of the pie. How do we reason about the parts without reasoning about the whole? And how do we reason about the whole without assuming the parts? We know which AS says has explanatory priority but which is to have *ontological* priority? If AS wants to explain the deliberations of a political structure in terms of the actions beliefs and desires of a set of political actors, how do we make sense of (and hence investigate) political actors without seeing them as part of the relevant political structure? But, for AS, that structure is constituted by the actions of those actors. Of course, we could propose, as Hedstrom and Bearman do, that the relationships are temporal and iterative. One set of actions, or the structure they generate, causes another set of actions which then constitute a changed political structure which then has its own causal consequences, and so on. . But that does not solve the problem of explaining synchronous micro and macro structures. For these, the synecdoche problem remains and all that supervenience gives us are explanatory race conditions.⁷

Of course, we might solve both problems by adopting sociology's usual trick for getting out of tight analytical corners, namely the 'point of view' point of view. Looking from the point of view of macrostructures, institutions, organisations and structures supervene on microstructures. Looking from the point of view of microstructures, such institutions etc. are caused by the actions of individuals through microstructures. Point of view hopping is an attractive and widely used tactic. Unfortunately, it does not make for theoretical integration, coherence and consistency.

⁷ What supervenience does solve (or rather sidestep) is the *ontogenesis* problem. We do not have to work out how we can create aggregate social life out of individual asocial actions. That is, how we go from 'no social life' to 'social life' through the actions of individuals.

Given these difficulties, perhaps some light might be shed if we look at the modality of supervenience relationships. What does "necessarily" mean in the assertion "A properties necessarily co-vary with B properties"? The property bundle A necessarily co-varies with the property bundle B in as much that there can be no change in A without change in B. How are we supposed to take this? There appear to be three alternatives:

- Perhaps A and B are identical - that is, A is B? For instance, H₂O is water (at least in our possible world) and water is necessarily H₂O. The properties of water (boils at 100c, freezes at 0c, is translucent, etc etc) are identical with the properties of H₂O. Is this what AS is claiming for macro and microstructures? It would seem not, for if they were identical there would be no constitutive or causal relationship to explain.
- Perhaps A is logically entailed by B? Being A is part of the meaning of B. Being a bishop supervenes on the attribute of being a cleric. But if the characteristics of some phenomena, say a run on the stock market, are logically entailed by the properties of the actions of individuals, then isn't it entailed by the meaning of the term 'run on the stock market' that it means the specific actions of individuals? Is this what AS is claiming; that is that the meaning of any particular macro-structural term is that it is or is not part of some specific micro-structural term? If this is so, then the relationships are conceptual. The trouble with this solution is that conceptual relationships are not amenable to causal explanation.
- Perhaps A is metaphysically contingent on B? This does open up the space for causality. Take Boyle's Law: $\frac{PV}{T} = k$. Temperature, pressure and volume supervene on each other. No change in one without change in the others. This relationship is nomological in our world but, of course, there are possible worlds (and, perhaps, possible set up conditions in our world) in which Boyle's Law might not apply. In those worlds, Boyle' Law, where it applied, would be an inductive generalisation. In that Hedstrom and Bearman argue that the same macrostructure might be constituted by two different microstructures, it looks as if supervenience is being conceived in terms of metaphysical contingency. In the social structures we know about and can imagine, macrostructure A can supervene upon microstructure B or upon microstructure C. This co-variation is not nomological (the two do not co-vary like mass and gravity), but is an empirical generalisation. Even if all the macrostructures of type A we have studied supervene on B, we can envisage A without B but with C, just as we can envisage mammals without backbones though we have never found one. However, because the generalisations sociology can offer (so far at least) are so weak, all we can say is that if A supervenes on B, it does so to some value of $p \leq 1$, and usually much less than 1. This would hardly be the kind of strong generalisation AS wants middle range theory to facilitate.

The key question, however, is not whether we can distinguish and then relate general categories or types but whether we can relate particular instances of them; *which* macrostructures supervene upon *which* microstructures? In biology, it seems we have a reasonable idea about which brain states and process are involved with which mental function. In sociology, do we have any idea how to fix the corresponding set of microstructures B for a particular macrostructure properties A?⁸ If we did know how to specify the co-variations (either deterministically, A always occurs with B, or probabilistically, A usually/sometimes occurs with B) then the way would be clear to study the (supervenient) relationships between A and B. At the moment we don't. To bridge this investigative lacuna, AS has recently turned to agent-based modeling (ABM). AS expects ABM to specify the relationships between particular microstructures and particular macrostructures and so dispel the mystery. As we will see, this might well be a vain hope.

3.0 THEORIES OF THE MIDDLE RANGE

3.1 The Problem

The analytic pull of AS is ecumenical and centroid seeking. It values incorporation and convergence. We have already seen this tendency in the way that causation and supervenience are brought together. It is also very clearly visible in the scope of sociological theorising which AS prefers— namely what Robert Merton called theories of the middle range. For Hedstrom and Udehn, middle range theory is

.....a clear, precise and simple type of theory which can be used for partially explaining a range of different phenomena, but which makes no pretense at being able to explain all social phenomena, and which is not founded upon any extreme reductionism in terms of its explanans. It is a vision of sociological theory as a toolbox of semigeneral theories. In this sense (the) vision has more in common with the type of theories found in the life sciences than those found in the physical sciences. (Hedstrom and Udehn 2009 p 31)

The notion of middle range theory is explicated by mapping sociological theory along two dimensions; the generality or particularity of the *explanandum* and the inclusivity or exclusivity of the *explanans*. This allows Hedstrom and Udehn to produce a conventional 2x2 matrix with the examples given below occupying the definitional polar cells.

⁸ As we have just seen, AS argues that different microstructures can produce the same macrostructure. Microstructure A is sufficient for macrostructure B but so is microstructure C. Neither A nor C is necessary but *some* microstructure is. Quite how this fits into the pattern of causal explanations in terms of sufficient and necessary conditions is a question we will have to return to.

	Particular	General
Inclusive	Geertz	Parsons & Luhmann
Exclusive		Becker and Homans

Talcott Parsons and Niklas Luhmann are said to offer theories which utilise a wide range of explanatory devices and explain the operations of society as a whole. Gary Becker and George Homans, though they are equally general in scope, concentrate on a limited range of explanatory factors. So much, so straightforward (if not uncontentious). The problems come with the *explanandum* dimension. Hedstrom and Udehn designate Clifford Geertz' notion of "thick description" as an example of inclusive/particular theories. This must mean something like the description of a particular pattern of action by enumerating the contextual detail in which that pattern is to be found. Certainly Geertz is concerned with rendering contextual detail, but this is to underpin ethnography as an interpretive method. His interpretive schema are as general as those of Parsons and Luhmann, Becker and Homans. It is just that they are tied to the detail of cases. At the other end of this dimension we have descriptions which are highly focused and low in scope, i.e. idiosyncratic accounts of singular phenomena. Hedstrom and Udehn call them "thin descriptions" but that is hardly illuminating. We can only think that such descriptions would be decontextualised summaries. It is hard to imagine anyone in sociology with that narrow and abstract a descriptive horizon. Indeed, it may be impossible to do sociology with that kind of horizon, which may explain why they offer no examples to illustrate what they mean.

Since it is so loose, the framework Hedstrom and Udehn use is not really that helpful as a mapping of sociological theory and therefore for defining the problem for which middle range theory is being offered as the solution. Although one of its dimensions (Particular/General) does look robust, actually it is univalent. Sociology does not trade in theories which operate at the particular level. Of course, the purpose of the mapping is not really to provide a viable summary of extant sociological practice. Rather, it is to provide a device whereby middle range theory can occupy a unique central place and from which it can offer a unifying strategy. It can be presented as the "Just Balance" of inclusive/exclusive - particular/general theories. The weakness of the initial organising framework is only important analytically because once it is in place, AS goes on to reduce the two dimensions to the classic macro-micro continuum discussed earlier and to use this as its own theoretical rationale. Integrating explanations of macro and micro (rather than, say, dispensing with the contrast altogether because the framework which licenses it is so weak) is what AS is about.

The positioning given by Hedstrom and Udehn isn't quite how Robert Merton presented middle range theories. For Merton, the contrast between general theory on the one hand and empirically oriented working hypotheses on the other was rhetorical rather than programmatic. What Merton was arguing for was what he

called (quoting T. H. Marshall) "stepping stones into the middle distance" to replace the prevalence of theoretical leaping from guesses, surmises and findings about individual cases to grand theoretical systems.

Middle-range theory is principally used in sociology to guide empirical inquiry. It is intermediate to general theories of social systems which are too remote from particular classes of social behavior, organization and change to account for what is observed and to those detailed orderly descriptions of particulars that are not generalized at all. (Merton 1968 p 39)

Merton felt the need for such theory was urgent because of sociology's immaturity. Trying to develop general theory was a wildly optimistic ambition when the required ground work had not yet been done. In an enlightening comparison, he drew a parallel between sociology as he found it and the state of medicine in the 17th century. Both are simply incapable of forming the generalisations required to provide a fully articulated robust general theory.⁹ Rather the strategy must

.....proceed on these interconnected planes: (1) by developing special theories from which to derive hypotheses that can be empirically investigated and (2) by evolving, not suddenly revealing, a progressively more general conceptual scheme that is adequate to consolidate groups of special theories. (ibid p 53)

3.2 The Solution

For Merton, then, middle range theorising depended on and encouraged the accumulation of tried and tested findings. The required theory was to provide

.....logically interconnected sets of propositions from which empirical uniformities can be derived. (P 39)

Merton summarises his proposal for piecemeal theorising in the following way.

- 1. Middle-range theories consist of limited sets of assumptions from which specific hypotheses are logically derived and confirmed by empirical investigation.*
- 2. These theories do not remain separate but are consolidated into wider networks of theory.....*
- 3. These theories are sufficiently abstract to deal with differing spheres of social behavior and social structure, so that they transcend sheer description or empirical generalization.....*
- 4. This type of theory cuts across the distinction between micro-sociological problems, and macro-sociological problems.....*
- 5. Total sociological systems of theory.....represent general theoretical orientations rather than the rigorous and tight knit systems envisaged in the search for a "unified theory" in physics.*

⁹ Interestingly, Merton was a man of his times. His view of the form generalisations should take was that they should be law-like, a position AS now rejects.

6. As a result, many theories of the middle range are consonant with a variety of systems of sociological thought.

7. Theories of the middle range are typically in direct line of continuity with the work of classical theoretical formulations.....

8. The middle-range orientation involves the specification of ignorance. Rather than pretend to knowledge where it is in fact absent, it expressly recognizes what must still be learned in order to lay the foundation for still more knowledge.....(ibid. pp 68-9)

This positions theories of the middle range in a contrast between two ways of demonstrating the utility or validity of general theory. One way (and this is the route chosen by Parsons, Luhmann etc) is to use particular cases to illustrate the applicability of general theories. That is, the particular case is construed in terms of the favoured theoretical terms and so its intelligibility secured. The second way (and this is Merton's route) is to demonstrate the generality of findings couched as theoretical specifications of particular phenomena (for example, relative deprivation or self fulfilling prophecies) by gathering broader and broader collections of cases of them. This is a kind of stepwise induction. Theories of the middle range are such stepwise inductive generalisations. AS adds a further requirement to this strategy. They should describe robust 'social mechanisms'.

Merton didn't think he had invented a new style of sociology. Indeed he is at pains to point to an array of prior and contemporary work which he feels fits the style of work he is pushing for. All he is doing is coining a name for what they produce. What is interesting is that AS does little more than gesture at such precursors.¹⁰ When it sets out what middle range theory and related social mechanisms are supposed to be, it cites just three (or four) of Merton's own worked out examples; structurally constrained opportunities; unanticipated consequences of action; self fulfilling prophecy (and its correlate the Matthew effect). This is surely a somewhat narrow base on which to propose a whole re-direction! There may be an obvious reason for this, of course. Very few of the people Merton cites saw themselves as contributing to the style of theorising he was promoting. He saw them as co-members of his campaign. They did not. Some such as Gouldner were vehemently opposed to it. So drafting them in as contributors to nascent AS is likely to start more hares and generate more problems than it will solve. However, this absence of reference to exemplars does raise the question which sociological studies being carried out today Merton would be inclined to claim for his case and why AS has not tried to capture them for AS too. It is equally interesting to note how few (if any) of the contributions to AS are actually positioned as instances of Merton-type theory. Is that too because they do not see themselves working in this vein?

The above considerations force two questions to the fore:

¹⁰ We are not alone in noticing this absence. Crowthers (2013) makes a similar point.

- To what extent are the mechanisms which are the core of AS' methodology actually inductive generalisations?
- How many of the mechanisms identified in studies actually have any sort of generalisability?

Without strong positive answers to both these questions, it is hard to see how AS can claim Merton's *imprimatur*.

3.3 AS and Middle Range Theory

As we have just seen, Merton was explicitly concerned with development of standard forms of sociological theory. The focus which AS places on mechanisms sits oddly with this. To be sure, in passing Merton does say that such theories will contain explanations of the mechanisms by which social effects are created but his is a casual, vernacular use. Certainly he does not identify mechanisms with middle range theory in the way that AS does. When we turn to examples of AS for insight, we find they have neither the analytic detail of thick descriptions nor the explanatory power of general theory. For the most part, they are descriptions of individual cases or groups of cases and do not appear to be designed to be aggregated. They have a bespoke character rather than general purpose ones that could act as modules in theory construction. There is no inductivity (to invent a terrible phrase) to them. Instead of trying to convince us we should see mechanisms as what Merton had in mind when he talked of theories of the middle range and what, therefore, we in sociology should be investigating, perhaps those who are promoting AS should be trying to convince their colleagues to build their mechanisms to a (small) set of templates which are designed to provide the cumulative findings which can be integrated to produce theories of the middle range.

Merton introduced theories of the middle range as part of an argument he was making about the strategic direction of theorising in sociology. He felt it was likely to lead to disappointment and disaffection. It wasn't that he was against general theory but that he thought it was too soon in the discipline's history for us to expect to be able to do it successfully. His argument did not rest on a binary division of the discipline (although he did recognise there were plenty of oppositions to be found). Rather, it rested on a contrast of theoretical types. This contrast provided the rhetorical space for him to introduce his proposed re-orientation of the discipline's strategy; one which involved significant but not total theoretical deflation. Although he is fairly clear what the general properties of theories of the middle range might be and lists lots of investigations which have made contributions that fit his bill, nowhere does he specify that such theories should be constructed around a single format, and certainly not that of 'explanatory social mechanisms' as AS conceives them. Seeing the introduction of middle range theories as a rhetorical move rather than a programmatic one obviates the need to give the idea more substance than it actually has. It is only if you want to re-direct sociology entirely that you have to construct middle range theory in terms of mechanisms (or something). Merton wasn't trying to do this but rather give some shape to what was already going on.