

INTRODUCTION

1. It is a striking fact that the extended efforts of both *sociologists* and *analytical philosophers* to work out what is termed a '*theory of action*' have taken little, if any, account of each other. Yet of the various reasons for this that come to mind none appears to be such as to foil any hopes for fruitful interdisciplinary exchange. Being concerned, apparently, with the same set of phenomena, viz. individual and social actions, the two theories can reasonably be expected to be partially overlapping as well as competitive and complementary. Accordingly each can eventually be shown by the other to need completion or revision. Whether or to what extent this is the case is subject to inquiry and discussion. The present volume addresses itself to this task. More precisely, it intends to make a beginning. Laying no claim to comprehensiveness, the papers to follow concur in trying to mark off theoretical differences and accordances and to bring into focus problems the clarification of which turns out to be most important to the conceptualization and explanation of social action. Their immediate aim is calling up joint theoretical efforts. Whether these will end up eventually in a unified theory serving the interests of both sides at once, desirable as this would be in principle, lies beyond the scope of what can be foreseen at present.

2. Naturally the first thing to be done is stock-taking. The papers of Thalberg and Turner (Parts I–II) are devoted to this. Clearly both cannot be expected to cover the entire range of relevant discussions in analytical philosophy and sociology. They have to select and accentuate. Some of the commentators even feel there is bias (cf. Leist, pp. 43, 49; Joas, Sections 2–3). Nevertheless there can be no doubt that both papers provide an extensive, highly informative survey of theoretical issues and positions and on the whole are certainly representative.

The materials presented by Thalberg and Turner give evidence of pervasive *differences* between the analytical and sociological approach to action, but the theoretical points of divergence are not entirely as one might expect. To be sure, classical themes of 'micro-' as well as 'macro-sociology' play an important part in sociological action theory. Nevertheless it is not confined to actions related directly or indirectly to the processes and institutions of

a society, or at least to undeniably social actions, but includes individual actions as well (cf. Locke, p. 98). Also it is not limited to the description or explanation of concrete, empirical cases, but tries to define and classify actions on a level as abstract as any 'nonempirically minded' philosopher could wish (Leist, p. 44; Locke, Section 2). On the other hand, analytical philosophers do not start from a concept of action broad enough to cover — conceptually — the relevant sociological field. Rather they concentrate almost exclusively on individual action. As compared to sociologists, their interests seem to be much more specific. They ask, e.g., for the exact meaning of terms like 'will' and 'intention', for the relation of what is ordinarily called a 'motive' or 'reason' to ensuing bodily movements and their physical or conventional results, or for the conditions of calling an individual actor 'free' and 'deliberative.' *Thematically*, one may conclude from Thalberg's and Turner's papers, analytical and sociological action theories overlap with regard to individual action generally, while they differ regarding the specificity of its theoretical examination and the degree of attention paid to social action.

3. As may have been expected, there is a marked difference in '*theoreticity*', though it is less striking at the point of theoretical *systematization*. Clearly what is termed 'action theory' in sociology comprises a variety of undertakings which are not related systematically and cannot readily be combined into one theoretical framework. Even the expressly tentative "cumulative conceptualization" sketched by Turner at the end of his paper (pp. 82ff.) is rejected by Joas (p. 89) as "mere eclecticism." The internal coherence of analytical action theory is greater. Yet Thalberg's review gives live evidence of the fact — pointed to critically by Leist (pp. 48f.) — that a systematic conception of topics involved is missing, too. The differences are distinctive as regards theoretical *explicitness* and *precision*. Obviously the analysis of individual action is much more advanced in analytical philosophy than in sociology. Some aspects taken account of by sociologists may have been overlooked and therefore may need to be added. But in general the theoretical 'give and take' will be much greater in the reverse direction. Concerning social action the relation is different. Here sociologists have developed a considerable number of concepts and explanatory distinctions, while analytical philosophers have scarcely made a beginning. However, the degree of explicitness and precision reached in sociology is still not equal to the standards of analytical philosophy as applied to individual action.

4. If this is, roughly, the situation as it has been until recently, the following

*cooperative approach* to social action seems to suggest itself: analytical action theory, refined perhaps by certain themes from sociology, provides the model of 'theoreticity' and the natural point of departure for an attempt to widen step-by-step the theoretical perspective, whereas sociological action theory gives the clues to relevant social phenomena and marks off in a preliminary way theoretical distinctions that will have to be worked out. Starting from *individual action* is reasonable, not only because its analysis is in many ways paradigmatic, but also because it calls up a number of *social aspects* itself. Most individual actions have social consequences (e.g., restricting the options of social partners, influencing their wants and beliefs, violating a social norm). Accordingly many 'individual' actions are implicitly social (wage-working, spending money, dressing fashionably, signalling for a turn, ect.). Mindful actors calculate consequences in advance. Also they act in view of expected actions of others. Even the most subjective motivational and deliberative abilities of individuals are related socially insofar as they have been determined by social learning. Any theory of individual action which is sufficiently differential and comprehensive will take account of these facts. Since analytical action theory has long been aware of them, its extension to social action seems all the more promising.

5. Now, it is precisely at this point that Tuomela's paper fits in (Part III). It is, in fact, a concise account of an elaborated analytical theory of social action presented in full length in his recent book, *A Theory of Social Action* (Dordrecht 1984). The central analytical tool for Tuomela is his concept of '*we-intention*' defined in terms of conditional 'I-intentions' and 'mutual beliefs' adopted conceptually from individual action theory. Accordingly beliefs and intentions are not ascribed to presumed 'social entities', but to individual human beings independent of whether they act individually or socially. However, if they are social actors in the qualified sense, '*we-intention*' requires them to be mutually interlocked in a way that makes their actions '*joint action*' of a kind not allowing for a reduction to mere 'aggregates' of individual actions. Thus Tuomela arrives at a precise definition of a subclass of actions which seems distinctively social and at the same time inclusive enough to cover most of what sociological action theory has been referring to.

Certainly quite a number of sociologists are likely to welcome Tuomela's approach as providing clarifications for notions they had been struggling with in the past (cf. Miller, Section 2). At any rate, building up social actions out of interlocked individual actions, as attempted by Tuomela, seems to be in

line with a great part of the sociological work surveyed by Turner (cf. for example pp. 63ff., 65f., 69f., 77ff., 80, 82ff.). So one might think that the cooperative approach sketched above can be followed without difficulty. Yet things are more complicated. Other sociologists feel that an analytical theory such as Tuomela's, while being acceptable for a limited number of cases, is inadequate as an account of social phenomena in general, since its *conception of 'sociality'* is biased or fundamentally ill-taken. Their objections must be examined.

6. There are two arguments concerning analytical *incompleteness*. First, it can be urged that not every kind of social action is such that it will *emerge naturally from* widening the scope of analytical theory of individual action. As an objection, however, this contention has little weight, since it confirms merely the expected necessity of interdisciplinary cooperation; viz. the experience of sociologists is necessary to demarcate the range of relevant social phenomena. Accordingly this argument from incompleteness is not used by sociologists in this volume.

7. Second and more important, the objection may be that many cases of social behavior do not *yield to* an analysis of the kind exemplified by Tuomela (cf. Locke, p. 99). Instances readily coming to mind are macro-sociological phenomena such as long-term political and economical processes, processes of social differentiation, mass-movements, trends of fashion, etc. But certain micro phenomena are relevant too, e.g., development and exertion of authority and domination in smaller groups. The analytical action theorist will be inclined to reply that such cases either are to be explained by social influence on the *motives* of individual actors (as, e.g., in mass-movements), or that they simply do not qualify as instances of social *action*. This latter move seems plausible and acceptable even to sociologists as long as the non-active social behavior in question can be adequately accounted for by functionalist or systems-theoretic analysis (Seebaß, p. 134; Haferkamp, reporting Habermas, pp. 202f.). But many sociologists will insist that the phenomena covered by systems-theory can and should be subsumed themselves under a general, more comprehensive notion of action (Turner, reporting Parsons, pp. 72f.; Turner, p. 84; Haferkamp, pp. 203f.).

The issue seems to be chiefly terminological. Terms like 'action' and 'behavior' are differentiated less sharply in ordinary usage than is assumed in analytical action theory (cf. Locke, p. 99). Commonly 'action' is used in a broad sense having no reference to intention and deliberation. E.g., in

certain contexts it is applied without restriction to behavior which – for whatever reasons – is subject to moral or legal evaluation (Leist, pp. 49f.). Sociologists are prone to a broader, philosophers to a narrower notion. Stripped of the terminological fracas, the critical point is just that there are kinds of social behavior which cannot be analyzed as joint action in the strict sense. Surely this is sufficient to show that an analytical theory in terms of joint action needs to be supplemented: either by including weaker notions of social action itself (cf. Tuomela, pp. 114, 116), or by joining another theory – such as, e.g., systems-theory – that takes account of the elusive cases. Judged by the extent of empirical applicability this could mean a substantial constraint. But it is certainly inadequate for revealing an intrinsic defect in the analytical conception of social action.

8. However, some of the objections raised by sociologists are more fundamental. Common to them is the conviction (articulated most clearly by Lukes, pp. 53ff.) that it is the very idea of analytical reduction which is conceptually misleading. The most important of these objections rely, in one way or another, on one of the following theoretical tenets:

- (A) The adequate elementary unit of analysis for social (or even individual) actions is stated to be ‘interaction’ between two or more people rather than individual ‘action’; call this the sociological contention of ‘*interactionism*’ as against analytical and traditional philosophical ‘*individualism*’.
- (B) The pervasive significance of *teleological action* (and hence of intentionality) is rejected.
- (C) The analytical approach is claimed to be inadequate in principle to actions governed by social *rules, norms, or values*.

These tenets and their import to action theory are the main theme of the last three Parts of this volume. Habermas (Part IV) defends a version of ‘interactionism’ by criticizing fundamentally ‘individualism’ and teleological action theory, thus focussing predominantly on (A) and (B). Weiß and Audi (Parts V–VI) are concerned with a problem relating directly to (C) and indirectly to (B), viz. the analysis of value-oriented action. If true, both (B) and (C) would mean a severe restriction of the applicability of analytical theories, as these are tied to the teleological pattern and there can be no doubt that most human actions are oriented somehow to rules, norms, or values. Still they would not be inapplicable as such. By contrast, (A) would imply that analytical theories of social (or even individual) action are

conceptually ill-taken and therefore must be abandoned outright. Since this is the more contentious claim, it is naturally considered first.

9. One source of sociological opposition to 'individualism' is fear (articulated occasionally by Miller, p. 146) that *sociology* would be reduced to *psychology*, if social action could be analyzed into interlocked actions of individuals. Though understandable as a motive this is surely no substantial objection. Taken as such it would be like arguing that since chemistry is ultimately based on physics there is no chemistry. The genuineness of an academic discipline does not depend on the theoretical irreducibility of its most elementary concepts or units of analysis. And even if it would, this would mean no more than that the boundaries between sociology and psychology are indistinct generally (as they partly are already at present); it would not mean that the interests of sociologists and psychologists coincide or that the traditional academic division of labor is inexpedient. In any case, the real arguments against an 'individualist' conception of action must be different.

10. The main line of Habermas's critique of 'individualism' is bound up with his critique of the teleological model. Individual action, even if taking account of or being addressed to others, is inherently teleological and thus, as he calls it (pp. 154ff.), "*success-oriented*". "Success-oriented" action, however, is the opposite of "*consent-oriented*" or "*communicative*" action, which Habermas believes to be the hallmark of human interaction and the only type of action doing full justice to social reality. Consequently, social action cannot be adequately accounted for on the basis of individual action.

To what extent communication and consent are in fact constitutive for groups and societies is controversial (cf. Tugendhat, pp. 181f.; Haferkamp, Section 3). But at least they make up an essential part of human interaction and therefore have to be taken into consideration. The crucial step in Habermas' argument is the alleged mutual exclusiveness of teleological and communicative or consent oriented action. To this the commentators (Tugendhat, pp. 179ff.; Baumann, pp. 189ff.; cf. Seebaß pp. 134f.) have raised a number of weighty objections, arguing that communicative and consent-oriented actions not only do not exclude teleological action but are themselves instances of it. Whether one merely intends to get into contact with somebody, whether one intends to inform him about a belief, want, or feeling of one's own, or whether one intends to come to an intersubjective agreement, in each case there seems to be some purpose for which the action or actions are done. In view of this it is tempting indeed to believe (with Tugendhat,

p. 181) that Habermas has projected into the concept of *action* a distinction which in fact concerns different *attitudes* people have, viz. acting exclusively for their own egoistic interests or giving equal weight to the interests of social partners. However, a thesis to the effect that societies built up exclusively out of egoistically acting individuals are to be discarded on moral grounds or, as a matter of fact, are not even stable historically (Habermas, pp. 155f.) can be advocated by the 'interactionist' and the 'individualist' as well.

11. Now, despite his sweeping claims for mutual exclusiveness (pp. 153, 173f.) there are several places in Habermas's paper where he himself appears to acknowledge the possible purposiveness of communicative, consent-oriented action (pp. 164, 174; cf. Tugendhat, p. 180) or even the teleological structure of action in general (pp. 154f.). Passages like these might suggest that the contrast he has in mind is in fact a more specific one. 'Interactionists' feel that social actions constituted entirely out of individual (if interlocked) teleological actions fall short of intersubjective community. Accordingly, communication or consent will simply not be *attained* teleologically unless there is some independent social link between the interactors *over and above* the individual actions addressed to each other. The "collective validity" or intersubjective "validity claims" referred to by Miller (p. 146) and Habermas (pp. 171f.), and the emphasis laid by Habermas on the "binding effects" of consent (p. 153) and on a "life-world" serving for a "reservoir" of implicit "background assumptions" in communication (pp. 165f.; cf. also Lukes, pp. 56f.) give evidence that it may be *mere* teleological action of individuals rather than teleological action *as such* which is considered to be inadequate to a complete analysis of social action.

Undoubtedly *every* social action (including Tuomela's 'joint actions') involving mutual understanding of beliefs, intentions, wants, or emotions draws on the presumption that the participants *share* relevant motivational and intellectual abilities, including specified conceptual and propositional structures. Otherwise *understanding* — as opposed to subjective interpretation — would be impossible. Yet it is not equally obvious what consequences this has for the conceptualization of social action. Although it may become a "philosophical nightmare" (Miller, p. 146) if generalized uncritically, it is scarcely unreasonable from the start to ask to what extent and on what grounds social interactors can rely on their presumptions. Invoking social common sense is in itself no sufficient refutation of social scepticism. And even if sceptical doubts can be dismissed completely, it will still have to be shown that the social link in question is constitutive for social *action*.

Sharing something, even if something as relevant to wilful action as a conceptual scheme or language, does not appear to *be* an active or interactive relation. To make his point the 'interactionist' has to maintain that the relevant social shares are *dependent* on social interaction. And not every interactive foundation will do. Intentional semantics (in the vein of H. P. Grice) analyzes linguistic meaning out into individual communicative actions and ensuing processes of conventionalization; but the actions involved are ordinary teleological actions relying already on shared (nonlinguistic) conceptual and intellectual structures. The interactions searched for by the 'interactionist' must be constitutive precisely for those elementary abilities which every individual and 'individualistically' defined social action is based on.

12. Therefore recourse to human *socialization* is crucial. It is assumed to be the decisive factor for shared active abilities among the members of societies or smaller social groups (Joas, pp. 92f.; Habermas, pp. 168, 173). Now, part of the resulting equality may be due also to other influences as, e.g., equal genetic endowment or equal experience. To make socialization an argument for their case 'interactionists' will have to defend the following much more specific statements:

- (1) The relevant active abilities of group-members *equal* each other.
- (2) Their equality is due *solely* to social learning.
- (3) Social learning processes are made up of *interactions*.
- (4) The essential characteristics of these elementary interactions are *carried over* to interactions of higher orders which in consequence are to be described by the same concepts.

Except perhaps for the first, all of these statements are subject to controversy and will readily be disputed by 'individualists'. Consider (3): wilful, intentional action being ruled out *ex hypothesi*, it is not easy to find a sense in which social learning processes may *significantly* be called 'interactions', i.e. markedly distinguished from nonactive learning processes analyzed exclusively in terms of sensory input, innate abilities, behavioral output, and sensory feedback. And even if there is such a sense, is it plausible to assert (4), projecting pre-intentional 'interaction' somehow *into* intentional interaction and (by the general argument from socialization) even intentional individual action? Considerations like these may show that it is still unclear whether the objections raised by 'interactionists' really call for a fundamental revision of traditional philosophical and analytical 'individualism.' But it



may well be that the issue will have to be taken up again, if further arguments – lying beyond the scope of what is expressly discussed in this volume, but stimulated perhaps by it – are brought forth to show that interaction rather than individual action is the most elementary unit of analysis.

13. Compared to this, doubts concerning the theoretical adequacy with regard to actions governed by social *rules*, *norms*, or *values* are less consequential, but they still call for substantial additions and revisions. Actions like these are subsumed naturally under the teleological pattern in analytical action theory (cf. e.g., Tuomela, pp. 120f.). Rules, norms, and values themselves are considered objectives of intentional action. Accordingly it is not *they* that are governing relevant actions, but *actors* wanting and trying to meet them. Whether they are subjectively posited by individuals, or are objectively ‘given’ social facts (like our legal code) or facts of reason (like Kant’s categorical imperative), is irrelevant to the teleological analysis. But many analytical philosophers are inclined to the additional assumption that ‘given’ rules, norms, and values may be reduced – perhaps without exception – to conventions established by interactions of individuals. In the same vein rationality with regard to rules, etc., is considered to be ordinary purposive rationality, viz. doing whatever is, or is rationally believed to be, required for the normative goals pursued.

Now, this analytical conception is called into question by Max Weber’s well-known distinction between “*means-end-*” and “*value-rationality*”. If this is taken to imply that the latter is different in kind from the former, it would seem to imply also that value-oriented action, or action guided by rules or norms, cannot be regarded a species of teleological action. Insofar analytical action theory would be inadequate. Hence it is requisite to look more closely at Weber’s concept of “*value-rationality*” and its theoretical implications.

14. On the interpretation given by Weiß both, “*means-end-*” and “*value-rationality*”, are to be subsumed under a more general Weberian concept of rationality, viz. rationality as “*understandability*” and “*communicability*”, allowing for different degrees. An action that is completely means-end-rational is of highest degree, as it is rooted directly in objective fact and therefore best understandable intersubjectively. By contrast, value-rationality, lacking this kind of objectivity, is of a lower degree, but is still understandable, says Weiß (pp. 215f., 218f.), in view of an inherent general claim to objective validity.

The interpretation has its difficulties. While it fits well to certain passages

in Weber, others do not appear to be in line with it (cf. Beckermann, p. 225; Føllesdal, pp. 238, 239f.). E.g., “traditional” and “affectual” action is taken by Weber — plausibly as it may seem — to be understandable to some degree, but in no way rational. To accommodate his interpretation to this Weiß introduces two senses of ‘understandable’ (p. 216). But if one equates (following Weiß, pp. 218f.) rationality with the broad sense covering — in accordance with ordinary usage — everything subject to the human intellect, it does not seem to conform to the ordinary uses of ‘rational’. And if ‘understandable’ is interpreted in the narrower sense, it is not easy to see how this might be defined without recurring explicitly or implicitly to the very concept of rationality it is intended to elucidate. Moreover, it is not clear how a *claim* to objectivity can be of any avail to the intersubjective intelligibility of norms and values (Føllesdal, p. 238). In any case Weiß’s interpretation does not appear to entail any structural separation of value-oriented from ordinary teleological action and thus does not touch on the adequacy of the analytical conception mentioned.

15. This would be different, if one could add a thesis articulated by Leist in his comments on Thalberg (pp. 47f.), viz. that it is precisely because of their inherent claim to objectivity that values and norms are separated in principle from subjective wants and, moreover, are much more efficient in integrating divergent wants into one motivational system such as an overall life-plan. But one may ask: Isn’t a claim to objective validity raised by individual actors still a subjective imposition? And granted the objectivity of the value itself, couldn’t each value-oriented action still be the product of a subjective want to conform to it? Are wants to be integrated into a life-plan at all independent of subjective preferences for some of them as against others? Why should real or claimed valuational objectivity be of any importance to an individual planning *his* future life? If intersubjectively valid values or norms serve a peculiar function for motivational integration, one might think that this is the case exclusively with regard to the diverging wants of different individuals living in a community or society.

16. Now, according to Beckermann (Sections 3–4 of his paper) *social integration* is the key to understanding Weber’s concept of “value-rationality”. Like Habermas (pp. 155f.) Beckermann stresses the fact that norms and values are indispensable to the stability of societies and, still expanding on Weber, joins to this the theoretically provocative assertion that stabilization would be impossible, if norms were followed “on mere means-end-rational motives”

(p. 232). If true, this could show after all that value- or norm-oriented action cannot be subsumed under the teleological pattern. Yet how plausible is it? The stabilizing function might be explained as well, or better, on ordinary teleological lines, viz. by assuming that relevant norms and values are 'implanted' with equal strength into each member of a society by early socialization and remain motivationally operative for the rest of their lives. Value-rational action might then be regarded a *special case* rather than a mere *analogue* to means-end-rational action which Beckermann claims it to be (p. 232) but, admittedly, is not able to specify further. So far, we may conclude, there is not sufficient evidence that Weber's concept of "value-rationality" points to a serious defect in the analytical conception of social rules, norms, or values.

17. However, Weber's distinction raises the general question *how* in principle actions 'guided by' values and norms should be accounted for theoretically? This is the problem Audi's paper addresses. Granted that value-oriented actions are teleological in structure, one may still wonder whether, in calling them *rational*, it is enough to look for consistent pursuit of whatever valuational goals, or whether one has to show in addition that the valuation itself is rational? In arguing against what he calls simple or modified "instrumentalism" Audi (Sections I–II) pleads for the latter option which is accepted also by others (cf. Weiß, p. 215; Føllesdal, p. 239; Döbert, pp. 285f.). The issue is not confined to valuation, since rationality might be required for wants and beliefs entering into nonvaluational action as well (cf. Baurmann, pp. 190f.; Føllesdal, p. 239). But in view of the objectivity claims attached to them values may be most prominent.

18. In any case the plausibility of the requirement depends on the relevant definition of 'rationality'. It can easily be accepted, if it refers to no more than a specifiable degree of *deliberateness* and *autonomy* in the actor. Obviously a valuation, want, or belief adhered to fanatically or imprinted unalterably by "diabolical neurosurgery" (Audi, pp. 256ff.) cannot be adequate grounds for rational action, even if adequate means are selected with utmost care and consistency. A particular version of this notion of rationality (viz. that of R. Brandt) is discussed by Audi and, while not rejected entirely, considered markedly inferior to an alternative termed "the well-groundedness conception of rationality". Invoking an analogy to the justification of belief, Audi states (Section V) that a valuation is rational to the extent it is directly or indirectly grounded in cognized or noncognitively "experienced"

*value-properties*, or “desirability characteristics”, of real objects, being either identical with or “supervening” somehow on natural properties.

This is a pronounced position raising a number of issues subject to further discussion. Is foundational realism plausible even with regard to beliefs (Vossenkuhl, Section 2)? Is the analogy sound (Vossenkuhl, Section 3; Döbert, Section 4)? In what sense can a value-property be real, if – admittedly (Audi, pp. 266, 271) – it can ground conflicting valuations at the same time, inter- and even intra-subjectively (cf. Döbert, pp. 286f., 289)? Isn’t a value-oriented *social* action much more rational, if it does *not* proceed on the assumption that values are real and binding for everyone, but takes account of their insurmountable subjectivity (Döbert, Section 3, 5–6)? Questions like these might induce us to come back to a weaker conception of rationality. A definition in terms of deliberateness and autonomy may be inadequate with regard to a particular version, but this does not prove it to be ill-taken theoretically. So it is thinkable that Audi’s valuational foundationalism, while inadequate for convincing the sceptic, will be of some value even for him in provoking renewed attempts at finding a definition which is considerably weaker, but still does not coincide with unqualified means-end-rationality.

19. Independent of the definition accepted it remains to be seen what consequences a rationality requirement concerning values, wants, or beliefs has when brought to bear on the concept of *action* and in particular *social action*. It is not obvious that its introduction makes any difference theoretically. Surely it does not raise any more doubts as to the adequacy of analytical action theory. Its only result may be that it makes rational action less common in everyday life. If (as is usual, cf. Audi, pp. 244f.) ‘rational’ is taken as a subordinate specification, the requirement does not appear to touch on the concept of action at all. But its import may be more general. Given that ‘action’ – at least in one relevant sense – is defined with reference to the actor’s wilfulness and activity (Seebaß, pp. 130f.), deliberateness and autonomy seem to be indispensable to some degree. And undoubtedly these are not independent of the social situation and early socialization of the actor. Clarifying the influences involved and assessing their possible conceptual consequences is an especially interesting task shown to be necessary by the discussions in this volume.