

On the Languages of Markets

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1. INTRODUCTION

In this essay, I look at differing conceptions of the *market*, ranging from the concrete where it is regarded simply as a place, to the abstract where it is looked on both as power and as a principle, and where its attendant vocabulary can be used to give meaning and distinction to the relation between God and man.¹ As such, I want to look at *market*, not as a keyword in the terminology of Raymond Williams,² but as a concept³ with widely differing meaning across cultures, and more specifically, across time within the same culture. Even though this opens up a vast subject, what makes the project manageable, and in line within the limits of my own competence, is the motivation which leads me to undertake it.

My primary motivation is to show that the language of economic theory in the last half century has undergone a shift in orientation and emphasis, and this shift has had, as an important corollary, a corresponding shift in our normative and evaluative stance towards markets and exchange. I document these shifts and set them in other contexts to show that they reflect an age-old tension between differing conceptions of man and society, and of individual self-interest and the larger public interest. I examine how these conceptions are seen with reference to each other, and how the meaning given to the term *market* leads them to conflict or coincide. As such, I pose a problem in the history of economic thought, albeit a history limited to only the last fifty years; and attempt to resolve it in terms of the differing

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¹I am aware of the bias in this last phrase; I use it primarily to draw attention to this bias.

²See Williams (1976) and revised in (1983).

³See Skinner (1979), as reprinted in Tully-Skinner (1989), for a distinction between the two.

emphases that can be given to the notions of *anonymity* and *negligibility*, economic and numerical, pertaining to an individual agent.

I am also motivated by development economics in which both economic theory as well as statistical and other mathematical vocabulary is used to understand the causes of the *backwardness* of the so-called less-developed countries (LDCs). I feel increasingly uneasy with a purely synchronic⁴ view of the subject. It is a view which proceeds from a conception of markets, more specifically, unfettered and unregulated markets, that is considered universal over time and space. In such a view, these LDCs are assumed to be on the same well-identified trajectories as those that the "developed countries" have already traversed, but with lags in terms of certain crucial economic and quantifiable indices. Thus, attempts to understand, and eventually to erase and overcome the differences in these indices do not, and need not, draw on broader cultural considerations.

I do not, of course, mean to argue that each particular LDC ought to be treated as unique, or at least as somehow qualitatively different from the others in ways that require a particular theory for each. It is clear that the postulate of a maximizing agent has taken us a considerable way towards the prediction and control of economic phenomena in both developed and in less developed countries. However, just as the total disregard of this postulate can produce unfortunate consequences,⁵ so too can the exclusive and complete reliance on it lead to the pitfalls inherent in a partial view. Thus, what I argue for is a diachronic⁶ view of the subject, one that supplements the theory with some awareness of the historical and cultural preconditions of the society one is studying. Put somewhat differently, I argue for a less-simplistic view of self-interest, as well as for some hesitancy and self-consciousness when we use terms such as *capitalism*, and the *optimality of free markets*. For all of this, a deconstruction of the terms *market* and *markets* is a particularly useful backdrop.

All of this leads me to my third motivation, and hence to the debate that has been going on with varying levels of intensity in both academic and policy circles, here in Pakistan and elsewhere. This debate, for want of a better phrase, can be simply termed Islam versus Capitalism. Twenty five years ago, Maxime Rodinson in a book with the same title, furnished the broad outlines of this debate. He asked

why, in fact, did capitalism triumph in modern times in Europe and not in the Muslim countries? But also – why has European capitalism been able to

⁴Readers not aware that the importance of the term goes back to Saussure, can see, for example, Holdcroft (1991) and the references therein.

⁵A view most persuasively argued by Bauer, see Bauer (1976, 1981, 1984).

⁶This is of course the dual to Saussure's earlier term.

penetrate the Muslim world so easily? In the past and in the present, has Islam, or at least the cultural tradition of the Muslim countries, favoured (or does it favour?) capitalism, or socialism or a backward economy of the 'feudal' type? Or does it urge those who are influenced by it in a quite different direction, a new economic system specific to Islam?⁷

Rodinson, of course, had his own answers to these questions, as did, and do, other scholars of both Islamic and non-Islamic persuasions. I do not address any of the answers here,⁸ as I am less interested in them than in the questions themselves. An examination of the languages of markets throws light on these questions in a way that may point as much towards their rephrasing as it does towards providing answers. This identification of twists and turns in our redescriptions, both of an important economic concept as well as the behavioural hypotheses on which such a concept may be based, is a useful enterprise. Such redescriptions go deeper into the meaning of *capitalism* by identifying the languages or paradigms that have been used to describe it over time as well as over space, synchronously as well as diachronously.

Of course, such a project is not original to me. It has been thriving, at least in disciplines allied to economics,⁹ but given the speed with which our world has been changing, it is clear that much more remains to be done. Furthermore, it is a project which is of particular relevance to the Pakistani context where any discussion involving economics, from a policy or a theoretical viewpoint, is intimately tied to Islam and Islamic norms. Indeed, in his Inaugural Address at the Sixth Annual General Meeting of this Society, Mr Ghulam Ishaq Khan devoted a major portion of his lecture to the Islamic economic system and to Islam's "distinctive middle of the road economic philosophy".¹⁰

It goes without saying that this essay is primarily exploratory. However, if it is to serve its broad objectives, its outline and basic ingredients naturally suggest themselves. I present vocabulary which comes primarily from mathematical constructions of economic theory, and place it in tandem both with some vocabulary from the Quran, as well as with some "local knowledge"¹¹ of markets in antiquity

⁷[Rodinson (1973), p. 3.]

⁸However, see, for example, [Naqvi (1981), p. 75] who asserts, and argues for, the view that *if the Islamic ideology had prevailed in the 18th century, capitalism could never have come into existence* (italics in the original).

⁹See, for example, the references to the work of Agnew, Appleby, Heinzelman, Jameson, Michaels, Oakley, Pocock, Sen and Viner given below.

¹⁰[See Ghulam Ishaq Khan, (1989), pp. 284-286].

¹¹I do not need to remind the reader that I take the term from Geertz (1983).

and in present-day Morocco. I also lay out some recent efforts to understand the abolition of slavery in the last century as a consequence of humanitarian sensibility engendered by the development of international markets. But before all of this, I mark out some methodological toeholds.

2. ON REALITY AND LANGUAGE

Economists formalize their conceptions of economic phenomena in terms of models and it is easiest to begin with a paraphrase of White's query¹²

What are models *models* of?

Such a question leads me to ask whether there is indeed an unambiguous and determinate reality somewhere "out there" waiting to be confronted, described, modelled and analyzed? It also leads me to ask whether primitive economic concepts such as an *allocation* or a *technology*, leave alone a *market* or an *economy* itself, have an essence which can be formalized once and for all? In what way are these concepts determined by *sensequalia*, to use Ayer's terms? Such questions, of course, are particulars of an enquiry constituting a long and rich philosophic tradition, and I turn to it for pointers towards answers.

In his 1979 book *Philosophy and the Mirror of Nature*, Rorty offers an exposition of the anti-representationalist and anti-metaphysical account of knowledge and culture. Such an account is one

which does not view knowledge as a matter of getting reality right, but rather as matter of acquiring habits of action for coping with reality.¹³

It is an account, moreover, which does not even want to get entangled into questions concerning the nature of "reality". It rejects the conception that *nature* has its own language and that notions like "objectivity", "rigor", and "method" can be used to discover such a language. It regards as futile the attempts by scientists (natural, social, literary or otherwise) to penetrate beneath the appearances either to see nature "in its own terms", or simply to recover it. Drawing on the early Heidegger and the late Wittgenstein,¹⁴ Rorty argues that in such an account, there is no "*privileged vocabulary*, the vocabulary which gets to the essence of the object, the one which expresses the properties which it has in itself as opposed to those which we read into it".

¹²Recall that [White (1978), p. 88] asked "What are representations *representations* of?"

¹³[Rorty (1991), p. 1.]

¹⁴See the essay titled *Wittgenstein, Heidegger, and the Reification of Language* in Rorty (1991a).

To take an example from economics, *technology* may be formulated as a subset of a finite-dimensional Euclidean space, or as a matrix of real numbers, or as a dynamic process whose laws of evolution are clearly specified, or as a function from one set of commodities, perfectly delineated and understood as inputs, to another set, also perfectly delineated and understood as outputs. Under any of these definitions, or the several that can and remain to be formulated, one cannot claim to have formulated *the* correct conception, or discovered a vocabulary which captures *the* essence of *technology*, or understood what is it precisely that makes *technology technology*. Rorty puts the matter with brutal candor.

The notion of such a vocabulary [is] a myth – that even in science, not to mention philosophy, we simply cast around for a vocabulary which lets us get what we want.¹⁵

In 1979, Rorty had already laid out this pragmatic vision; his later work¹⁶ amplified it. In this work, he underscores his anti-essentialism by explicitly rejecting Hume's epistemological distinctions between "ought" and "is" or between "facts" and "values" or indeed between "morality" and "science"; and by offering a doctrine in which there are no constraints other than conversational ones. Accordingly, this quest for a distinctive "method of the human sciences" is misguided, and the idea of tying down particular methods, some value-neutral and some not, to particular lines of inquiry, confused. There are no objective, value-neutral methodologies, even counting those that adopt criteria of empirical tests as decisive for rational knowledge of the world.¹⁷ There are only two distinct requirements for the vocabulary of the social sciences: it should contain descriptions of situations which facilitate their prediction and control and it should contain descriptions which help us decide what to do.¹⁸

Hilary Putnam also subscribes to the rejection of many of these dichotomies¹⁹ but in his 1981 book, *Reason, Truth and History*, he is not quite as blunt as Rorty.²⁰

I shall advance a view in which the mind does not simply 'copy' a world which admits of description by One True Theory. But my view is not a view

¹⁵See Rorty (1981).

¹⁶See, in particular, Rorty (1989, 1991, 1991a). Also Malachowski (1990) and Prado (1989).

¹⁷[See Hesse (1988), p. 120.]

¹⁸See Chapter 11 titled *Method, Social Science and Social Hope* (pp. 195 and 197) in Rorty (1981).

¹⁹See Putnam (1990).

²⁰For a comparison of the views of these two thinkers, from Putnam's point of view, see his lecture *Realism with a Human Face* in Putnam (1990).

in which the mind *makes up* the world either, (or makes it up subject to constraints imposed by 'methodological canons' and mind-independent 'sense-data'). If one must use metaphorical language, then let the metaphor be this: the mind and the world jointly make up the mind and the world.²¹

We use our criteria of rational acceptability to build up a theoretical picture of the 'empirical world' and then as that picture develops we revise our very criteria of rational acceptability in the light of that picture and so on and so on and forever. The dependence of our methods on our picture of the world is something I have [already] stressed; what I wish to stress here is the other side of the dependence, the dependence of the empirical world on our criteria of rational acceptability. I am saying that the 'real world' depends upon our values (and, again, vice versa).²²

Charles Taylor²³ does not subscribe to a holistic view of knowledge and affirms a distinction²⁴ between the natural and the human sciences. Nevertheless, he too denies a "spectator theory of knowledge", and our ability to discover a social reality in any society independently of the vocabulary of that society. Taylor emphasizes that language is constitutive of the reality and is "essential to it being the kind of reality it is". Hence practices cannot be identified in abstraction from the language we invoke to describe them.

Once we think of *technology* as a transformation from inputs into outputs, and *commodities* as anything for which there is a *market*, our domain of understanding and use of the terms extends to include an Egyptian who sells his body-parts to feed his children.²⁵ In such an extension, he becomes a *technology* and in so doing, broadens our understanding of what a *technology* is, and of the nature of our formalization of it. Whether the concept should be so extended depends on whether it gives us insight into what we want to do.

In my attempt to de-emphasize a determinate and bounded conception of "reality", I have all the while also been discussing the nature of language. It is as if I am as much concerned with what it is that I model as I am with the instruments with which I do the modelling. Indeed, the fact that words can mean many things, and that they change their meaning over time, is well-understood.²⁶ What I would

²¹[Putnam (1981), p. xi.]

²²[Putnam (1981), p. 135.] See also Lecture IV titled *Reasonableness as a Fact and as a Value* in Putnam (1987).

²³See Taylor (1971); also reprinted as Chapter 1 in Taylor (1985a).

²⁴Also see Williams (1983).

²⁵To take a recent example from a frontpage story in *The New York Times* of September 23, 1991.

²⁶For a very readable, popular account, see White (1984).

like to emphasize is that this elementary intuition goes some way towards the development of an anti-nomenclaturist account of language; one that can be viewed on a level parallel to the anti-representationalist account I presented above.

Saussure developed in the period 1907–1911 a conception of language diametrically opposed to the nomenclaturist view that words are simply labels of independently identifiable things:

the basis of language is not constituted by names. It is an accident when a linguistic sign is found to correspond to a perceptual object, rather than an idea. This [nomenclaturist] conception is open to criticism on several points. It assumes that ready-made ideas exist before words; ... it does not tell whether a name is vocal or psychological in nature; finally it lets us assume that the linking of a name and a thing is a very simple observation – an assumption that is anything but true.²⁷

Saussure's work on the foundations of language fed into a torrent of modern work that affirms what Rorty has called the "contingency of language".²⁸ Such work denies that language can be value-free, but rather that it reflects our moment in history and the value-structures within which we are consequently situated. Hence, the conceptual vocabulary with which we describe and evaluate our world is similarly tainted by this history and by the place we occupy within it.

It is not that this elusive nature of reality and language is alien to economists. Schumpeter, writing as early as 1954, looked on a model as "... a picture of things as we see them" and remarked

wherever there is any possible motive for wishing to see them in a given rather than another light, the way in which we see things can hardly be distinguished from the way we wish to see them.²⁹

But this directly raises the question as to who is it that constitutes the "we"? In asking this question, I turn my attention from the object and the basic constituents of the model to the modeller herself. In the words of Taylor

what the ontology of mainstream social science lacks, is the notion of meaning as not simply for an individual subject; of a subject who can be a "we" as well as an "I". We are aware of the world through a "we" before we are

²⁷Quoted in [Holdcroft (1991), p. 11.]

²⁸The phrase constitutes the title of Chapter 1 of his 1989 book.

²⁹[See Schumpeter (1954), p. 45.]

through an "I". As men we are self-defining beings, and we are partly what we are in virtue of the self-definitions which we have accepted, however we have come by them. What self-definitions we understand and what ones we don't understand, is closely linked with the self-definitions which help to constitute what we are – we have great difficulty grasping definitions whose terms structure the world in ways which are utterly different from, incompatible from our own.³⁰

Adam Smith had already put forward this "contingency of selfhood",³¹ albeit in different words.

Were it possible that a human creature could grow up to manhood in some solitary place, without any communication with his own species, he could no more think of his own character, of the propriety or demerit of his own sentiments and conduct, of the beauty and deformity of his own face ... Bring him into Society, and he is immediately provided with the mirror which he wanted before. It is placed in the countenance and behavior of those he lives with, which always mark when they enter into, and when they disapprove of his sentiments.³²

In the vocabulary of economic theory, these quotations from Taylor and Smith emphasize agent interdependence or externalities, and question both the sovereignty of consumers and the endogeneity of their tastes and preferences. It is precisely in the differing answers to these questions, and the consequent tension between social and individual desires that such answers imply, that I hope to locate the shift in the language of economic theory; for now, I would like to turn to the implications of these ideas towards the understanding of a particular text.

3. ON TEXT AND CONTEXT

Think of the following thought-experiment. There are a finite number of authors, each of whom has aims and objectives which are fulfilled by the writing of a text, but the extent to which these aims are achieved depends on the kind of text that an author chooses to write, as well as on the kinds of texts written by the others. In addition, each author works under limitations and rules whose precise nature need not concern us but which also depend on the texts written by all the others. It should be noted that in laying out this scenario, I do not specify what

³⁰See Taylor (1971); also reprinted as Chapter 1 in Taylor (1985a).

³¹The phrase is also Rorty's; it constitutes the title of Chapter 2 of his 1989 book.

³²*The Theory of Moral Sentiments.*

I mean by a *text* but simply assume it to be something that can be instantly produced.

What kind of text would an author choose to write in such an idealized set-up? A quick and facile answer would point to a text which each author considers “best” in terms of her individual aims and objectives, and one that respects the rules and limitations that she has to work under. Such an answer is wrong because the question itself is ill-posed and incoherent. Given the interconnectedness built into the setting, no author can evaluate the feasibility and optimality of her choice without knowing the kinds of texts that have already been written by the others. Each author is unaware of his or her *context*, and the choice of a text is indeterminate if the context is indeterminate.³³

Simplify the problem by supposing that a text can also be instantly recalled and instantly replaced.³⁴ Let us further suppose that in a so-called first stage, all the other authors have proposed the text that they want to write. This leads a particular author to face a particular and determinate context, and it is now possible for her to choose a text that best achieves her objectives – her *optimal* text. The problem is that this optimality cannot be sustained. Her choice will influence the aims and objectives of all the other authors, as well as the rules and limitations under which they work, and thereby lead them to replace their texts by others. On their part, a changed context demands changed actions. However, as soon as the other texts are changed, our author’s context has also changed, and she would then presumably replace her optimal text by another, and in so doing, begin a second stage. What was to be a once-and-for-all choice has now degenerated into a process.

Does such a process converge to some determinate outcome? Is there, for want of a better term, an *equilibrium* constellation of text, one text per author, which is self-sustaining in the sense that no author has an incentive to replace her text if all the others keep to theirs. Such a constellation implies for each individual author an *equilibrium* context in which he or she works. I can now rephrase my original question and ask whether, given an *equilibrium* context, there is a “best” text from an individual author’s point of view? This question now makes more sense and can even admit an affirmative answer. An author’s contribution to the *equilibrium* constellation is clearly her best text – given the context, it accomplishes for her what she wants to do. However, since such a text is context-dependent, in what sense is she really the author of it? Do not the other authors, by choosing the context in which she works, nudge her towards, and therefore determine, her choice? To the extent that they so do are they also not the authors of her text? And

³³The extended quotations from Taylor and Smith in the section above are also relevant here.

³⁴Economists will recognize that I now fall back on the fictions of Walrasian *tâtonnement* or Edgeworthian *recontract*.

what about authorial intention? Does it spring only from her or also from those whose choices go in determining the context in which she works and to which she responds?

I ask these questions with an *equilibrium* constellation of texts as a background, but it is important to note that they are independent of it. In any case, the circumstances under which there exists an *equilibrium* constellation of texts, and a corresponding *equilibrium* context, are not my primary concern; I am much more interested in using this simple parable to point towards the exciting theoretical advances that have been made in the last thirty years in understand the act of reading and thereby in untangling the interrelated questions of text, authorship and context.³⁵ These advances constitute "literary theory", and I have neither the space nor the competence to go into the intricacies of hermeneutics and reception theory, of structuralism and semiotics, of post-structuralism and deconstruction,³⁶ and to the implications of these ideas for writing and reading, be they texts of history or of political philosophy,³⁷ or even of economic thought.

The idea of language games, however, goes way back to Wittgenstein, and the conception of texts as *speech acts* and performative utterances to Austin. Indeed, Pocock conceives of the whole enterprise of writing, typically in response to previous writing, as the playing of such games.³⁸ My parable simple reduces these ideas to a concrete and technical form, less for itself, and more for illustrating what it assumes away.

The most important abstraction, of course, has to do with the treatment of time. Once this is explicitly introduced, all the complexities of a repeated game, and moreover one in which the number of players is indeterminate, come flooding in. Context, within the confines of my parable, does not admit of texts that have been written by others who are no longer part of the game or who have yet to become a part. Memory, selective or otherwise, interpretations of interpretations, contexts of contexts, possibilities of anticipation or flashback;³⁹ none of these have any role to play in a timeless setting. Once we take account of these factors, the multi-dimensional and imperfect nature of texts is quickly revealed. They can now be understood and interpreted in a variety of ways and at a diversity of levels; and "a really complex text [can] be seen as performing polyvalently, [and engaging in] all manner of cunning games as it moves from one level to another".⁴⁰

³⁵See the anthologies compiled by Harari (1979) and Macksey-Donato (1970).

³⁶For one useful point of entry into the field, see Eagleton (1983).

³⁷For a stimulating and extended discussion of such implications, see, in particular, the work of Condren (1985); LaCapra (1983); White (1973, 1978) and Skinner, as for example, in Tully and Skinner (1989).

³⁸See, in particular, his *Politics Language and Time*.

³⁹*Prolepsis* and *analepsis* in Genette's terminology; [see Eagleton (1983), Chapter 4.]

⁴⁰See Pocock (1987a).

It is precisely time that allows Pocock to view political philosophy as a “conversation”, or as an ongoing “dialogue”, and leads him to elaborate it in terms of the Saussurian distinction between *parole* and *langue* and that between *synchronic* and *diachronic* linguistics.⁴¹

Speech acts upon people, texts upon readers: but this action is performed sometimes synchronously, through the fairly immediate responses of the hearers and readers, sometimes diachronously, through the *parole*'s efficacy in bringing them to accept change in the usages, the rules and the perceived and implicit entailments of *langue*.⁴²

[If] each move's success or failure will be determined within the *durée bien moyenne* of the current state of the game, never within the more durable contexts provided by social and linguistic structures, ... there would only be *parole* and no *langue*.⁴³

The history to be written now consists of both *événement* and *moyenne durée*, both *parole* and *langue*; of the intellectual and verbal acts of theorists as agents, and of the durable language-structures (or paradigms) within which and upon which they are performed.⁴⁴

My parable is also totally silent as to the language in which the text is presented. As I keep repeating, the very use of a term goes towards undermining the “original” meaning of the term. Moreover, given past uses, the natural question arises as to whether we use language or it uses us?

Languages are powerful mediatory structures, and to act in and upon them is to act upon people immediately perhaps, but by changing their means of mediation, which is often done indirectly and takes time. It is the use of language – of language not perfectly controlled by its users – that constitutes the historicity of political philosophy as of many other activity.⁴⁵

As soon as I draw attention to the unstable and imperfect nature of language, the very idea of what is a text is called into question. Is it a determinate and bounded object? Is it the private property of the author or of a group who are to give it its definitive interpretation? For how long a period of time do such rights extend, and

⁴¹Also see Chapters 2 and 4 in Holdcroft (1991).

⁴²Pocock (1987).

⁴³See Pocock (1987).

⁴⁴Pocock (1979).

⁴⁵The first sentence in this quote is from Pocock (1987) and the second from Pocock (1980).

for how long can they be enforced? More generally, is a text simply a vehicle for producing meaning and if so, does the entire work of an author constitute a text? As in a poem, does the meaning of a text lie in another text? Can an economy be looked on as a text? Is a model of an economy a text? Does the meaning of a model lie in another model?

All of this leads me to the authors themselves. My parable already allows for changes and limitations within which they are to operate – it is only a small step from that to admit changes in the authors themselves. As a consequence of a text, an author may change to such an extent that the fulfilment of the aims and objectives of another author are more important to her than the fulfilment of her own. Thus, when one says that the very definition of what it means for a text to succeed changes as a consequence of another text, one is referring to an author's self development and self-awareness through language and communication,⁴⁶ and also restating in the present context the sense of the quotations from Taylor and Smith. Pocock puts it thus.

Speech-acts, whose function is to transform the communication system and bring about the erection of a linguistic universe in which he can see himself to exist. In transforming the communications system, he is not merely recreating his own identity, but operating upon the identities of others.

[They] enhance his capacity to view himself as a historical being and the acts of thought and speech he performs as historical acts: to recognize that he is making choices and transmitting messages which are conditioned but which modify the structures that condition them, and that the historical world he inhabits is shared with others and governed by the law of heterogeneity of ends, so that not all the consequences of his acts will be those he can foresee, intend or desire.⁴⁷

These unintended consequences lead me directly to the rules hinted at in my parable. Who monitors, even for a timeless context, the author of each text? And ensures that she operates within the individual rules and limitations that have been imposed on her? Who imposes these rules? Are these rules evident? Do they constitute "literary criticism" – a subject which selects, processes, corrects and rewrites texts in accordance with certain institutionalized norms of the 'literary'? Are these norms themselves context dependent? And if so, what is their context?

The erection of a set of conditions – intellectually scrupulous though it may

⁴⁶Also see Todorov (1984).

⁴⁷Pocock (1980).

have been – was a power play, a bid to set the rules of the game to be played.⁴⁸

So far, I have not explicitly mentioned the reader. When Lacan conceives of meaning “as always in some sense an approximation, a near-miss, a part-failure, mixing non-sense and non-communication into sense and dialogue”,⁴⁹ does he undermine the conception of a reader as one who is “bugging the time stream and interposing his own unscrambler”⁵⁰ to obtain a noise-free account. Once a text is seen as a technology for the production of meaning, I can ask whether the reader writes the text, or more generally, whether a particular text is rewritten in different periods? Are the consumers of models (mathematical, literary or otherwise) as important as the modellers themselves? Can a text only be reread? If the reader is the author, who is the signifier and who is the signified, the phenomenon being modelled or the modeller herself?

What is the relevance of these questions to an essay on the languages of the market? I can only restate my objectives; I am trying to understand the meaning of *market* as brought out in five texts: Debreu’s *Theory of Value*; a volume authored by Cournot, Nash and Harsanyi,⁵¹ *The Quran, Meaning and Order in Moroccan Society* authored by Geertz, Geertz and Rosen, and Williams’s *Capitalism and Slavery*. More generally, I am trying to understand the meaning of these texts themselves. The questions I ask represent the so-called hermeneutical turn – the turn towards a subject which makes its enterprise the interpretation of texts, sacred or otherwise. The parable of this section is also relevant to my over-all enterprise in another way – it anticipates the Cournot-Nash-Harsanyi construction around which, I argue below, a change in the language of economic theory can be discerned. Before all of this, however, I return to the beginning of my narration and examine the conception of a market as a place.

4. ON MARKET AS A PLACE

I begin with antiquity and an important figure in this discussion is Hermes, the Greek god not only of commerce but also of theft, of weights and measures and known for his cunning and ingenuity.⁵² As discussed by Agnew, the word *herm*

⁴⁸See Pocock (1980).

⁴⁹The words are from [Eagleton’s (1983), p. 167] exposition of Lacan.

⁵⁰As in Pocock (1980).

⁵¹Such a text does not exist, but it is a simple matter for any publisher to create it from the relevant pages of Cournot (1838), from Nash (1951) and from the three papers referenced under Harsanyi (1967-1968).

⁵²See, for example, the introduction of Harari-Bell to Serres (1982).

signified the boundary stone marking off the ancient place of exchange as sacred ground where

exchange occurred among early Greek communities [in] the form of mutually sanctioned theft – a “silent trade” between persons who never saw one another but merely left and retrieved their goods at a sacred boundary stone or its analogues.

Appropriately, it was Hermes, god of the boundary stone, who became the Greek patron of trade, embodying as he did the suspicion and apprehension towards strangers common to most household economies. As a god, Hermes was a marginal figure known for his “skill at the oath”, that is to say his ability to manipulate the literalism that others brought to transactions bound by kinship or familial honour.⁵³

It should also be pointed out in this context that the Homeric world had no word for *merchant*.

With the importance of the *agora*, the main political, religious and military assembly point of the Greek city-state, Hermes gradually became urbanized, and exchange moved into the centre of the city. Nevertheless, trading and exchange by professional merchants for profit continued to be regarded as degrading occupations and a threat to social norms and cohesion. Herodotus quotes Cyrus remarking, when contemplating an attack on the Greek city-states,

I have never feared men of this kind who set up a place in the center of the city where they assemble and cheat each other with oaths.⁵⁴

As Agnew emphasizes, the higgling-haggling of the marketplace, or what was later seen to be the propensity to truck or barter, was for classical thinkers a mere caricature of the collaborative ideal of the *oikos* and the deliberative ideal of the *polis*. Accounting as an activity and exchange for the sake of exchange, Aristotle’s “chrematistic exchange”, threatened to transform the *nomos* of the *oikonomos* from the householder’s obligation of hospitality and liberality into a narrow calculus of cost and benefit. The marginality of the original marketplace was mirrored in the marginality of those who conducted its affairs, even when these affairs were removed from the periphery of the city state and installed at its core. Trade was restricted to a large group of resident aliens to whom the rights of prop-

⁵³[Agnew (1986), p. 21.]

⁵⁴See Finley (1973).

erty ownership and citizenship were systematically denied.⁵⁵

The centralization of trade from the periphery to the heart of the *agora* may be due as much to ease the task of information gathering as to frame the market within the governing structure of authority and power. This centralization was also accompanied by an insistence on oaths, witnesses and visible tokens and by the worship of *Limentius* (the threshold god) or of *Janus* (the gate god). Such a process manifested itself through a variety of words: *metics* began to be used for alien merchants and it is derived from the root word for both “intermediary” and for “change”; *limen* which began to be used for the ancient marketplace but also meant “threshold” and gave rise to “limitation”; *horkus* or oath was itself etymologically derived from the word for fence or enclosure.

What emerges from this brief consideration of market as a place in ancient Greece, is a conception of *marketing* as an activity to be controlled and regulated – it disturbs the sanctity of the home and the integrity of political life. The connotation of the term that comes closest to contemporary usage seems to be the one carried by *racket* and *profiteering*, or by market as in *marketeers* and in *black marketing*.

5. ON MARKET AS AN ABSTRACTION

I turn next to another connotation of the term, one that emerges from the basic “scientific” vocabulary which is currently used to formalize “perfect competition” and make the case for a regime of “unfettered” or “free” markets. In so doing, I move from the concrete conception of the market as a place to a more abstract view of markets as a celebration of self-interest.

Consider a stylized setting in which there are a finite number of perfectly divisible commodities and also two kinds of agents; producers characterized by their *technologies*, and consumers characterized by their *preferences*, *initial endowments* and *shares* in the profits of the producers. I shall assume an uncountable number of both producers and consumers, and in so doing, express the intuitive idea of *numerical* and *economic negligibility* of each agent. The multiplicity of each type of agent, apart from guaranteeing the insignificance of the actions of each, also underscores the fact that the setting I am describing is a metaphorical description very much in the same spirit that the atom is considered to be described a seamless sphere or a miniature planetary system; or that a society is viewed as a clockwork mechanism or a living organism.⁵⁶ Of course, how fruitful the metaphor proves to be depends on the uses to which it is put.

⁵⁵[See Agnew (1986), pp. 21-22.] Also see the references in Footnote 14 on page 21 of this book to Aristotle’s economic analysis.

⁵⁶See Oakley (1984).

The notion of *perfect competition* for this stylized economy is based on two ideas: an *allocation* and a *price system*. An *allocation* is a list of consumption plans, one feasible plan per consumer, and a list of production plans, one feasible plan per producer, such that the aggregate of all the consumption plans equals the aggregate of the initial endowments and of all the production plans.⁵⁷ The notion of an allocation is *the* answer to the basic question of how the economic problem of any society is to be solved – it represents how the resources of any society are to be divided among its various members, with or without recourse to the given technology. A *price system*, on the other hand, is a list of non-negative numbers, as many numbers as there are commodities, and it is a formalization of *markets* in the sense that each of the perfectly defined commodities has associated with it a price at which *any* amount of that commodity can be bought or sold by an individual agent.

A *competitive equilibrium* then, is a pair consisting of an allocation and a price system such that at this price system, each producer's plan is a profit-maximizing one, and each consumer's plan is one that is "best" in his budget set; best in terms of his individual preferences. I shall refer to the allocation in a particular competitive equilibrium as a *competitive allocation*.

It is important to appreciate the implicit assumptions and the behavioural hypotheses underlying this formulation of perfect competition. There is an underlying polity which ensures order, particularly in the sense of the fulfilment of contracts. Furthermore, individual decisions are not constrained by resource availability. Each agent does the best that she can do for herself, oblivious of the others, individually or collectively. If the prices are right, which is to say that they are the competitive ones, all markets clear in the sense that there will be no gluts or shortages.

I can now ask several technical questions. Does a competitive equilibrium exist? This is asking for the aggregate consistency of uncountably many decisions, all motivated solely by individual self-interest formulated in its most pristine form. How many such equilibria are there? How are these competitive prices established in the first place? Are there endogenous forces in the economy which ensure that, once disturbed, the system has built into it the ability to return to an equilibrium? In short, how robust is a competitive equilibrium? Answers to these so-called "positive" questions take me to the conception of the market as a dynamic process involving *recontract* and *learning*, and constitute both the achievement and the promise of the discipline. However, rather than pursue this, I take a "normative" turn towards the "market as a principle" and ask how *desirable* is a competitive allocation.

⁵⁷Note that with an uncountable number of agents, these lists of plans also consists of uncountably many elements. Note also that the aggregate has to be formalized as an integral.

The societal desirability of an allocation can be formalized in several ways but I shall limit myself to five criteria; namely *technological efficiency*, *Pareto optimality*, *core*, *equal treatment* and *value*. The first two are widely known and understood.⁵⁸ As regards the third, recall that an allocation is in the *core* if there does not exist a coalition, a province in a multi-provincial economy, that can do better for its members by using only its own resources and by not being part of the larger economy. Recall also that an allocation exhibits the *equal treatment* property if it treats identical consumers identically. Finally, a *value* allocation is one in which each individual obtains a commodity bundle reflecting his contribution to society, where this contribution is measured by averaging his or her contribution to all the possible coalitions that can be formed in that society, a contribution to a coalition being measured by the gain in welfare obtained by a coalition as a consequence of the individual being part of it.⁵⁹

I can now present

Proposition 1. *Under universality of markets and under perfect delineation of property rights, every competitive allocation is in the core and hence Pareto optimal and hence technologically efficient. It also satisfies the equal treatment property and belongs to the value.*

This is, in essence, the first fundamental theorem of welfare economics and an important part of the case on which the desirability of a regime of “free markets” rests. The depth of this result should not be overlooked. It says, in particular, that there will be no incentive for any province or group to opt out of an economy if the allocation of resources of this economy is generated through competitive markets. It also says that two agents with identical preferences and identical endowments and ownership shares will obtain, in equilibrium, commodity bundles that are identical in terms of their preferences. Finally, it imparts a notion of fairness to what an agent receives through competitive markets by arguing that it represents and measures the importance that society attaches to the resources that the agent contributes to it. All this is impressive indeed! However, more is true.

Proposition 2. *Corresponding to any Pareto optimal allocation, there exists a price system and a system of property rights, such that under this system of property rights, the price allocation pair is a competitive equilibrium. Corresponding to*

⁵⁸See, for example, my presentation to the Society last year, published as Khan (1989).

⁵⁹There are some technical questions involved here on how to measure a coalition's welfare if one is not committed, unlike Bentham and the naive utilitarians, to the adding of interpersonal pleasures and pains. Aumann (1975) shows how these difficulties can be surmounted.

any core or value allocation, there exists a price system such that the price allocation pair is a competitive equilibrium.

Finally, we have a result that guarantees that the theory is not vacuous.

Proposition 3. *There exists a competitive equilibrium.*

It is worth repeating that these results are circumscribed by the assumptions of *universality of markets* and of *perfect delineation of property rights*. Indeed, the fact that property rights are perfectly delineated is already explicit in the vector of initial endowments and profit shares in the definition of my stylized *private ownership economy*; and *universality of markets* is explicit in the definition of a competitive allocation. It is also worth emphasizing that, in an important sense, the above Arrow-Debreu-McKenzie-Aumann (ADMA) construction is value-free. All the italicized terms in my discussion can be defined with notions of rigour and precision current in modern mathematics. The propositions, in relying on rules of mathematics, are then as valid in Morocco as in Indonesia;⁶⁰ as true in Damascus now as in Damascus in the seventh century. This is “dry discourse” in the words of Hobbes.

When for the doing of anything, there be infallible rules, (as in Engines, and Edifices, the rules of Geometry,) all the experience of the world cannot equall his Counsell, that has learnt or found out the Rule. Logic must avoid tropes or figure since these introduce equivocation and ambiguity, which are opposed to the aims of those who proceed from definitions.⁶¹

Moving on to a more contemporary writer,

.. two plus two make four. If that is granted, all else follows.⁶²

So what are MacIntyre,⁶³ Putnam, Rorty, Taylor and others of their persuasion talking about; wherein does the particularity of this construction lie? The answer is clear; it lies precisely in the confidence with which we assert the validity of the

⁶⁰This is with Geertz (1968) in mind.

⁶¹These quotations are from Hobbes's *Leviathan* and Thomas White's *De Mundo Examined*; [see Johnston (1986), pp. 11–13] for precise references.

⁶²The quotation is from Orwell's *Nineteen Eighty Four*; see Chapter 8 in Rorty (1989) for a precise reference.

⁶³I have not referred to MacIntyre's work. See, in particular, his 1973 paper and his two recent books.

“correspondence” between such a construction and our conception of reality, or, more generally, between nature’s language and the current scientific jargon. As such, the concepts of this section are *figures of speech*, or more sharply, *metaphorical redescriptions*⁶⁴ of what we conceive to be reality.

6. ON FICTIONAL MARKETS

Once one “buys” into this mathematical description of reality, it leads to the posing of problems in a particular way, and as a natural consequence, to the emphasis on a certain set of questions and to a particular research programme. I shall illustrate this observation by considering the so-called problem of “market failure”.

In the ADMA formalization of “free markets”, problems having to do with time, uncertainty or externalities can be “seen” as having to do with the violation of the *universality of markets*, and require for their solution the creation of *fictional* markets.⁶⁵ Simply regard a given commodity at two different points in time or under two different states of nature or at two different points in space as a different commodity. In the context of externalities, look on a commodity consumed by an agent as different from the same commodity consumed by another agent. Such a prescription highlights markets that are “missing”, and stresses the need for the supplementation of such markets by *artificial* or *fictional* markets, along with their own shadow prices.⁶⁶ In cases such as location where markets do exist, it gives us insight into the differences in commodity values. In any case, what such a formulation forcefully brings out is that once such a “complete” set of markets *can* be created, we can appeal to all the desirable properties of perfect competition guaranteed by Proposition 1. Indeed, the import of Proposition 2 is precisely that such markets can be created. There are, of course, natural questions which arise as to the conditions for the validity of Proposition 2 and to the more plausible second-best case when some but not all such markets can be created. However, rather than these problems, let me illustrate this consequence of a “market as a principle” by turning to the question of the production and allocation of *public goods*, a particularly simple case of consumer interdependence.

Recall that a *public good* is a commodity whose consumption by any one agent does not decrease the amount of it available for any other. A canonical example of a public good is *defence expenditures*; my consumption of *defence* does

⁶⁴For other presentations of economic ‘dry discourse’, as metaphorical redescription, see Phelps (1961) and Sen (1974). Viner (1970) is also relevant in this connection.

⁶⁵Such a view represents a part of the prevailing orthodoxy – see, for example, Arrow’s testimony before the U. S. Congress in Arrow (1969).

⁶⁶These are also called planning or accounting prices. In the context of uncertainty, these are the Arrow-Debreu prices for each contingent commodity.

not decrease the amount of it available to any one else and is identical to their consumption. What is the amount of resources to be devoted towards the production of such a commodity? The notion of a *Lindahl equilibrium*, a celebrated concept in the theory of public expenditures, answers this question by relying on fictional markets. This involves the generalization of the definition of an *economy* to include, in addition, a finite number of public goods, along with the stipulation that no consumer can be initially endowed with such goods. The notion of an *allocation* can be straightforwardly modified, as can the notions of *technologically efficiency*, *Pareto optimality*, and *equal treatment, core and value allocations*.⁶⁷

The creation of fictional markets in an economy with public goods requires a *personalized price system*; one in which the competitive price system is supplemented by individualized price systems for public goods, one price per good and one price system per consumer, and such that the revenue raised by these individualized prices equals the cost of production of the public goods themselves. Each consumer calculates his budget set with respect to his or her individualized price system and the resulting generalization of a *competitive equilibrium* is termed a *Lindahl equilibrium*. I shall refer to the allocation in a particular Lindahl equilibrium as a *Lindahl allocation*; it is based on artificial markets for each public good, one market per agent, such that the pursuit of individual self-interest in these fictionalized markets leads to the demand for an identical amount of each public good, and an amount also identical to that supplied by profit maximizing producers operating with regard only to their prices. The point is that such an allocation also satisfies the fundamental theorems of welfare economics stated above. I will not state these corresponding generalizations but simply restate my basic point that Lindahl prices are a canonical example of the creation of artificial and abstract markets.⁶⁸

In a *Lindahl allocation*, we see a first preliminary recognition given to the complexity inherent in the definition of a *commodity*. We also see operational significance given to the assumptions of *universality of markets* and *perfect delineation of property rights*. The point is that in the presence of public goods, property rights *cannot* be perfectly delineated. This is simply because each consumer has an incentive to misrepresent his demands and *free-ride* on the benefits obtained, a difficulty first noted by Wicksell. The notion of a Lindahl equilibrium is simply an analytical crutch to see what an absence of these difficulties entails.

Whereas the theory of private goods attains its most satisfactory and sharpest form in a setting in which each agent is numerically and economically negligible, it should be noted that the situation is totally reversed in the case of public goods.

⁶⁷For the last, see Aumann-Kurz (1977) and their references.

⁶⁸See Khan-Vohra (1985) for a general existence result for Lindahl equilibria. Khan-Vohra (1987) extend this work to a setting with non-convexities in production.

Here, the incentive to misrepresent is strongest since each negligible agent knows that understanding his demand will have no effect on aggregate societal decisions; hence, he can obtain precisely what he desires without having to pay anything for it. Of course, the point is that each individual, by reasoning in this way, will lead society not to allocate any resources to the public good, and bring about an outcome which nobody desires. Thus the separation between individual and societal interest is complete.

These complications lead naturally to the literature⁶⁹ on *mechanism design* and to the question whether one can design planning process or mechanisms such that they will lead consumers to reveal their demands for public goods? However, rather than this literature, what I would like to emphasize is that we have here a not-so-subtle change in emphasis. The ADMA construction paints a picture of an economically negligible individual transacting with an impersonal market. The parameters of the other agents in the economy are of no consequence to him, and the interdependence between the agents manifests itself through, and only through, the price system. In this idealized system, there is no need for any other information; all the relevant information is already contained in the competitive prices. Public goods lead one to question such a picture, and ask along with Hurwicz, whether the difficulties they introduce can also be seen, albeit in hindsight, in a setting consisting only of private goods. To ask the question another way, is it not more fruitful to begin with the presumption of the universality of *incomplete* markets rather than the other way around? Thus, the notion of public goods gradually reorients the theory, and it is to this reorientation that I now turn.

7. ON INCOMPLETE MARKETS

One necessary implication underlying the notion of competitive equilibrium, and even that of a Lindahl equilibrium, is that every agent, consumer or producer, is "perfectly clear" as to what it is that he or she is buying or selling. I now question this starting point of a "given finite number of perfectly divisible commodities"; it is hardly as innocuous as it may seem. If the theory exposed above is to have a more general relevance to "real world" economies, and especially to those characterized as LDCs, one has to face up to the fact that the notion of a "commodity" is a lot more complex than this.

Such complications are not given full prominence in the case of public goods because such commodities emphasize only one particular aspect, namely non-appropriability. Light from a lighthouse is non-appropriable, but each agent is clear as to its characteristics, which may even include reliability if extensions over time

⁶⁹See Green-Laffont (1979) and their references to the work of Groves, Ledyard and others.

are envisioned. Similarly, radio or TV broadcasts are non-appropriable, but here again no agent is assumed to have any doubts or imperfect information as to the quality of the programming involved. Clearly this exclusive emphasis on non-appropriability is justifiable only to the extent that it facilitates analytical distinctions. No commodity or service is perfectly non-appropriable or perfectly appropriable. Furthermore, to the extent that there is imperfect information as to the characteristics of any commodity, there are elements of non-appropriability in transactions pertaining even to such a simple commodity as an "apple".

I can now take the obvious next step and argue that in a set-up where commodities are not fully and precisely defined, property rights can *never* be fully delineated. In the vocabulary of the ADMA construct, what we have is a blurring of the distinction between public and private goods and a pervasiveness of Wicksell's problem of misrepresentation. In the conception that I put forward here, all commodities have *public good characteristics* in them. Barzel refers to such characteristics as being part of the *public domain*.

The public domain is ubiquitous; innumerable commodity attributes are placed in it. Opportunities for people to gain at the expense of others seem rampant.⁷⁰

What happens to the concepts and results pertaining to the ADMA construction once we try to incorporate these considerations. Clearly, one has to begin with a modification of a commodity space and consequently, with a richer definition of a *commodity*. This is the change in emphasis that I keep referring to, both above as well as in the introduction to this essay. The fact that in the "real world" there are problems in enforcing contracts or that agents may not be anonymous and economically negligible was, of course, always well understood; what is new is that it is now given primary emphasis in posing the problems and working towards their solution. Such a reorientation leads one to focus on the several difficulties with the ADMA construction.

The first difficulty relates to the enforcement of these contracts and hinges both on the *observability* and the *verifiability* of different contingencies.⁷¹ The second difficulty is related to this but is somewhat more subtle. It is simply the observation that an economically and in working towards numerically negligible agent may not be informationally negligible. His actions can affect the parameters of the others by virtue of the "local information" that he possesses. Thus, one is gradually but inevitably led away from transacting with an impersonal market, as is

⁷⁰[Barzel (1989), pp. 114 and 118.]

⁷¹See O. Hart's entry on *incomplete contracts* in *The New Palgrave*.

required under the solution concept of a competitive equilibrium, to the analysis of other concepts which involve bargaining, misrepresentation, side-deals, kickbacks and other unsavory phenomenon which can be grouped under the general heading of corruption, a phenomenon hardly unheard of any economy, developing or developed.

It may be worth pointing out here that these conceptual difficulties are referred to in the literature as problems posed by adverse selection and by *moral hazard*. Both involve imperfect information and the consequent uncertainty that arises, but under a rough classification, *adverse selection* refers to situations where there is uncertainty as to the basic parameters of the agents, principally uncertainty as to her *type*, whereas problems of *moral hazard* arise in the difficulties that accompany the monitoring of actions that are taken to exploit this uncertainty.⁷²

We see that the difficulties with the parable of perfect competition have now led to a vocabulary of their own – a vocabulary that hinges on a richer definition of a *commodity* and an *agent*.⁷³ This sets the stage for the development of a theory of *mechanism design* in a setting much broader than one consisting of economies with public goods. One can ask whether any allocation, not necessarily a competitive one, has associated with it a *mechanism* or *game*, which is to say payoffs and strategy sets for each player, such that it is sustained as an equilibrium of such a game. A fundamental result in this context is the Gibbard-Satterthwaite theorem on the impossibility of strategy-proof mechanisms⁷⁴ in finite economies without any public goods. With such a result, the reorientation of the theory that I asserted in the introduction to this essay becomes established, and problems which had been at the background since the beginning of the century are brought to the fore.

8. ON MARKETS AS A GAME

Once I focus on imperfect information and on strategic misrepresentation, it is a matter of course that I am led to the conception of a market as a game of imperfect information. I have already introduced a game in my discussion of a text and its context; I now repeat and complement that discussion but in a totally different set-up.

The basic ideas can be reintroduced through the so-called *prisoners dilemma* game. Consider a situation consisting of two players, each of whom has two possible actions: to play by the rules or to violate them. If they both play by the rules, each obtains a payoff of (say) ten units; if both violate the rules, they obtain nothing. However, if one plays by the rules and the other does not, the first loses (say)

⁷²See R. Guesnerie's entry on *hidden actions* in *The New Palgrave*.

⁷³For a more detailed discussion with examples and references, see Khan (1989).

⁷⁴See M. Satterthwaite's entry in *The New Palgrave* on this subject.

two units, and the second obtains fifteen units. It is clear that society as a whole will be better off if both players play by the rules. In the vocabulary of the ADMA construction, *Pareto optimality* requires each player to play by the rules. However, it is equally clear that it is in neither player's self-interest to do so. A player does much better by violating the rules, irrespective of how the other plays. If the latter plays by the rules, his best response is to "doublecross" and obtain fifteen rather than ten units; and if he does not, to obtain nothing rather than lose two units. Thus, the equilibrium will be one in which society will be universally corrupt.

In this example, there is no impersonal market but rather an exclusive focus on agent interdependence through their objective or payoff functions. One can, of course, create fictional markets along the lines of my earlier discussion, and lead the two players to play by the rules and in so doing, to attain Pareto optimal outcomes. The point is that there is no incentive for them to transact in these fictional markets; these precommitments or contracts can simply not be enforced without abandoning the postulate of a maximizing agent. The *prisoner's dilemma* game introduces the notion of a *Cournot-Nash equilibrium* and reveals that, in general, such an equilibrium does not lead to *Pareto optimal* outcomes, leave alone those that constitute *core*, *value* or *equal treatment* allocations. A formal treatment of such an equilibrium notion is warranted.

Consider a setting with a given finite number of players each of whom has a *strategy set* and a *payoff function* depending on the actions taken by all the players. A list of actions, one action per player and each belonging to his strategy set, is said to be a *Nash equilibrium* if no player can do better in terms of his own pay-offs if everyone else keeps to their stipulated actions. The notion has built into it an element of *self-fulfilment*. I assume a particular action for everyone else and then do the best in terms of my payoff functions; my action then leads to a situation in which everyone plays what I assumed them to have played.

I can now ask whether there exists a Cournot-Nash equilibrium for a general class of games. However, rather than this, I turn to the modifications required for games of imperfect information as conceived by Harsanyi.⁷⁵ The overall set-up remains the same but we now associate with each player his *type* or *signal* space. A player's response depends on the signal that he receives from *nature* or elsewhere, and rather than assume a particular action for everyone else, I as a player, assume a *function of actions*, one action per signal and one function per player, and take my best action corresponding to any particular signal that I receive. In this way, I obtain my best *function of actions*. A constellation of such functions, one function per player and each based on his own idiosyncratic signal space and his

⁷⁵The general reference here is Harsanyi (1967, 1968).

own strategy set, is said to be a *Nash equilibrium* if no player can do better in terms of his obtaining a higher payoff if everyone else keeps to their stipulated functions.

It goes without saying that various refinements are possible at this stage. If one “buys” into this mathematical description of reality, it naturally leads one to the posing of problems in one way as opposed to another. I can ask for the existence of Nash-Harsanyi equilibria in which *identical* players take *identical* actions in equilibrium; I can explore the differences between equilibria based on *mixed* rather than *pure* strategies; I can study *repeated* games or allow differential weights to the players or bargaining parties; I can focus on an important special case in which there is a well-defined *principal-agent* setting.⁷⁶ More generally, I can ask whether competition, conceived in this game-theoretic sense, lead to co-operation.

From the perspective of this essay, the basic point, of course, is that the direction of inquiry has shifted. This is also “dry discourse” but one which emphasizes agent interdependence and works with a definition of an agent different from that in the ADMA parable. Such a definition departs from the conception of an agent whose preferences are characterized by a utility function or a preference relation as a primitive, but views it rather as *function* from society’s actions to the space of possible utility functions or the space of possible preference relations. One can ask how a summary of society’s actions and the dependence of individual preferences on such a summary can be formalized.

It would take me too far to present the outlines of such a theory here.⁷⁷ In terms of a summary position, the theory considers a social setting with a “large” number of individuals in which each individual is dependent on the actions of society but acts in a way dictated by his subjective perception of these actions. Once these perceptions are precisely formulated, one can formulate an equilibrium notion, *Cournot-Nash equilibria*, in which I, a single numerically-negligible agent, act on the basis of my perception of reality, and my actions bring about a reality which sustains my perceptions and hence my actions. Of course, at a somewhat deeper level of analysis, subjectivity has an objective basis, and the problem can be seen as rooted in the notion of “imperfect observability”. Thus, the work may be seen as pertaining to a society constituted of a continuum of econometricians, each acting on his own forecast of society’s actions, and each of whose forecast is self-fulfilling in equilibrium despite his forecasting, information-processing or observa-

⁷⁶Such a setting leads to important insights into the nature of a variety of economic relationships, in labour, land, credit and product markets. These detailed applications of the general theory represent an important area of on-going research and constitute a new orthodoxy; see J. Stiglitz’ entry on *Principal Agent Problems* in *The New Palgrave*.

⁷⁷See Khan (1989a); Khan-Rustichini (1989, 1990), Khan-Sun (1990), Chakrabarti and Khan (1991) and their references.

tional abilities. It is worth emphasizing that the issue is not the "accuracy" of these forecasts; but whether the bounded rationality of each agent, different bounds for different agents, finds justification for itself in equilibrium. Thus even in equilibrium, the forecasts are not "correct", but are such that they lead to actions which can be sustained.

The basic point is that this theory can be seen as a formalization of the idea of the "contingency of selfhood" that I drew attention to through the quotations from Taylor, Smith and Pocock. It can also be seen as a further elaboration of the parable presented in my discussion of a text and its context, but one that now illustrates a different set of issues. Furthermore, rather than viewing the problems of agent interdependence through fictional markets, as dictated by the ADMA construction, such a theory views this construction through the lens of the Cournot-Nash-Harsanyi (CNH) formalization.

I would now like to supplement this theory of games, with or without imperfect information, with some "descriptive" material from Islamic societies; but before this, it may be more fruitful for the development of my theme to turn to some ideas from the Quran.⁷⁸

9. ON MARKETS IN THE QURAN

I begin with what Torrey finds in 1892 the unique character of the Quran.

The mutual relations between God and man are of a strictly commercial nature. Allah is the ideal merchant. He includes all the universe in his reckoning. All is counted, everything measured. The book and the balances are his institution, and He has made himself the pattern of honest dealing. Life is a business, for gain or loss. He who does a good or an evil work receives his pay for it, even in this life. Some debts are forgiven, for Allah is not a hard creditor. The Muslim makes a loan to Allah; pays in advance for Paradise; sells his own soul to Him, a bargain that prospers. The unbeliever has sold the divine truth for a paltry price, and is bankrupt. Every soul is held as security for the debt it has contracted. At the resurrection, Allah holds a final reckoning with all men. Their actions are read from the account book, weighed in the balances; each is paid his exact due, no one is defrauded. Believer and unbeliever receive their wages. The Muslim (who has been given manifold payment for each of his good deeds) receives moreover his

⁷⁸My translations of the Quran are taken from Ahmed Ali, 1990 (Princeton University Press); Kenneth Cragg, 1988 (Collins Liturgical Publications); N. J. Dawood, 1956 (Penguin Classics); M. M. Pickthall, undated (Mentor Books); A. Yusuf Ali, 1934 (Amana Corporation).

special reward. A more simply mathematical “body of divinity” than this is difficult to imagine.⁷⁹

Before elaborating on these ideas, it is well to keep in mind the time at which Torrey is writing⁸⁰ and his basic hostility to the religion. In particular, he views the Quran as a text with a single author, namely Mohammed,⁸¹ and refers to his lack of originality.⁸² This notwithstanding, the basic thrust of the claim is worth illustrating and examining. In a nutshell, and at the very least, it is another formalization of the phrase *universality of markets*.

I present only three ideas: a ledger of accounts, mortgage and loan, and a letter of credit. I begin with *Hisab* which carries the connotation of “reckoning or calculating or accounting”. One derivative of *Hisab* is *Hasâ* which is a divine attribute; and two other derivatives, *al-Haseeb* and *al-Mohsâ*, are among the ninety-nine names or attributes of God. One of the five articles of the faith is the belief in the Day of Judgement which is expressed both as *Youm al-Qiyamat* and as *Youm al-Hisab*. Thus we read

Round each man’s neck We have hung his ledger of deeds, and on the day of Resurrection will present it as a book spread out (and say): Read your ledger; this day you are sufficient to take your own account.⁸³

This idea of a book (*Kitab*) or ledger in which are recorded all the good and bad deeds recurs at several places.

You will see each community kneeling down; and each community will be summoned to its ledger of good and evil deeds.⁸⁴

⁷⁹[Torrey (1892), p. 48].

⁸⁰For an introduction to the context in which Torrey worked, see Said (1978).

⁸¹This is a denial of the cardinal tenet of Islam, namely that the Quran represents *divine revelation* and is God’s speech to man. For an elaboration of this idea in the context of the methodological positions laid out in Section 2, see Khan (1991).

⁸²On page 49, Torrey writes “Mohammed was *not original*. Lack of originality might also be called his chief characteristic as compared with other founders of religious systems. Abstract thinking was not his forte. The Arabic language and his own native power of rhetoric were two helpers that always stood him in good stead, but for theologizing he had little taste and less capability.”

⁸³Translation of Ahmed Ali 17 : 13–15. Yusuf Ali renders it thus. *Every man’s fate We have fastened on his own neck. On the Day of Judgement We shall bring out for him a scroll which he will see spread open. It will be said to him: Read thine record. Sufficient is thy soul this day to make out an account against thee.*

⁸⁴Translation of Ahmed Ali 45 : 28. Yusuf Ali renders it thus. *And thou wilt see every sect bowing the knee: every sect will be called to its record: “This day shall ye be recompensed for all that ye did. This our record speaks about you with truth: for we are wont to put on record all that ye did.*

The ledger (of their deeds) would be placed before them. Then you will see the sinners terrified at its contents, and say: "Alas, what a written revelation this, which has not left unaccounted the smallest or the greatest thing!"⁸⁵

Not even an atom's weight in the heavens and the earth, or something smaller or greater than it, is hidden from Him, and which is not recorded in the all-too-manifest Book (*Kitab mubeen*).⁸⁶

There is not a sum, large or small, that they spend, not a piece of land that they traverse (in the service of God) which is not put down in their favor, so that God could reward them for what they had done.⁸⁷

And if there be no more than the weight of a mustard seed, We will bring it (to account) and enough are We to take account.⁸⁸

It is We indeed who bring back the dead to life, and write down what they send ahead (of their deeds), and traces that they leave behind. We keep an account of all things in a lucid register.⁸⁹

Note also the idea of a written reckoning.

O believers, when you negotiate a debt (*dain*) for a fixed term, draw up an agreement in writing, though better it would be to have a scribe write it faithfully down; and no scribe should refuse to write as God has taught him, and write what the borrower dictates, and have fear of God, his Lord, and not leave out a thing. If the borrower is deficient of mind, or infirm, or unable to explain, let the guardian explain judiciously. ... When the witnesses are summoned, they should not refuse (to come). But do not neglect to draw up a contract, big or small, with the time fixed for paying back the debt. This is more equitable in the eyes of God, and better as evidence and best for avoiding doubt. But if it is a deal about some merchandise requiring transaction face to face, there is no harm if (no contract is drawn up) in writing. Have witnesses to the deal, (and make sure) that the scribe or the witness is not harmed.⁹⁰

Ahmed Ali interprets the scribe as a lawyer, and *dain* as bill of sale or letter

⁸⁵Translation of Ahmed Ali 18 : 49.

⁸⁶Translation of Ahmed Ali 34 : 3. Also see 10 : 61.

⁸⁷Translation of Ahmed Ali 9 : 121.

⁸⁸Translation of Yusuf Ali 21 : 47. Ahmed Ali renders it thus .. *and even if it were equal to a mustard seed in weight, We shall take it (into account). We are sufficient for computation.* Also see 99 : 7-8.

⁸⁹Translation of Ahmed Ali 36 : 12.

⁹⁰This is from the translation of Ahmed Ali; 2 : 282-3.

of credit. In the words of Yusuf Ali,

Commercial morality is here taught on the highest plane and yet in the most practical manner, both as regards the bargains to be made, the evidence to be provided, the doubts to be avoided, and the duties and rights of scribes and witnesses. Probity even in worldly matters is to be, not a mere matter of convenience or policy, but a matter of conscience and religious duty. Even our every-day transactions are to be carried out as in the presence of God.⁹¹

The following three quotations further underscore this commercial ethos.

God has verily bought (*ashuari*) the souls and possessions of the faithful in exchange for a promise of Paradise. So rejoice at the bargain you have made with Him: for this will be triumph supreme.⁹²

Miserable is the price for which they have sold their souls, in that they deny (the revelation) which God has sent down.⁹³

Say to them: How short-lived is the commerce of this world; but that of the next is best for those who fear God; and you will not be wronged the breadth of a thread.⁹⁴

Next, I turn to the term *rahen* which means mortgage or security. Referring to this term, Yusuf Ali writes

A pledge or security stands on its own independent footing, though it is a very convenient form of closing the bargain where the parties cannot trust each other, and cannot get a written agreement without proper witnesses. The law of Deposit implies great trust in the Depository on the part of the Depositor. The Depository becomes a trustee, and the doctrine of Trust can be further developed on that basis.⁹⁵

Every soul will be held in pledge for its deeds (*kasabat rahena*).

(Yet) is each individual in pledge for his deeds (*kasaba rahene*).

If ye are on a journey and cannot find a scribe, a pledge with possession (*fa rahenu maqbudahu*) (may server the purpose). And if one you deposits a thing on trust with another (*amanatahu*), let the trustee faithfully discharge

⁹¹Yusuf Ali; Footnote 333 on page 114.

⁹²This is from the translation of Ahmed Ali; 9 : 110.

⁹³2 : 90 in Yusuf Ali's translation.

⁹⁴This is from the translation of Ahmed Ali; 4 : 76.

⁹⁵See Yusuf Ali, Footnotes 334 and 335.

his trust.⁹⁶

Next, I turn to two words *qurd* and *aslaf*. The former means “loan” or “lending of property” whereas the latter refers to *advance payment* very much in the same spirit as “buying futures”.

Who will give a goodly loan (*qurdan hasanan*) to God which He might double many times? For God withholds and enlarges.⁹⁷

Yusuf Ali translates the verb *aslafa* as “sent before” while Torrey sees it as “paid in advance”.

Because of the (good) that ye sent before you in the days that are gone.⁹⁸

It is clear that I just scratch the surface of this important topic. There are many important concepts which require detailed study from an inter-disciplinary point of view. Chief among these is, of course, *riba* but it cannot be understood in isolation from, for example, *Bay* or the commercial sense in which *zulm* is used. What is interesting from the perspective of this essay is the almost total reversal of the treatment of *market* and *markets* from that current in Ancient Greece. What is also interesting is whether methods of literary criticism have any relevance to the understanding of a text that represents for a large segment of humanity God’s speech to man.⁹⁹ However, I leave these issues and turn to a discussion of how Quranic injunctions manifest themselves in the more concrete situations found in Medieval Islam and contemporary Morocco.¹⁰⁰

10. ON A CONCRETE CONCEPTION OF MARKETS

I begin with Rosen’s statement that

⁹⁶The references for the three *ayah* are respectively 74 : 38, 52 : 21 and 2 : 283. All translations are from Yusuf Ali.

⁹⁷Translation of Ahmed Ali 2 : 245. Yusuf Ali renders the term *qurdan hasanan* as a “beautiful loan” which *God will double unto his credit and multiply many times*. The term occurs in almost identical passages in 5 : 12, 57 : 11, 57 : 17, 64 : 17, 73 : 20. In Footnote 710, Yusuf Ali translates the term as “spending in the cause of God”, while Torrey sees *hasan* in this context as “advantageous terms” or “praiseworthy” or simply “good cause”.

⁹⁸69 : 24 in Yusuf Ali’s translation. Also see 10 : 30.

⁹⁹See Izutsu (1959, 1964) for an application of Saussurian linguistics to interpret the Quran. His ideas are also discussed in Khan (1991).

¹⁰⁰Geertz (1983) shows how these injunctions need to be supplemented by other “local knowledge”.

[the] central analogy, the key metaphor, that may prove helpful about the social life in Morocco ... is concerned with notions of contract and negotiation. It is an image of the bazaar market-place writ large in social relations, of negotiated agreements extending from the realm of the public forum into those domains – of family, history and cosmology – where they might not be most expected to reside. [A] single individual draws upon a set of regularized ways to enter into agreements with others and thereby construct a network of obligations as extensive and as fragile as his or her own negotiating capacities.¹⁰¹

Rosen draws attention to the importance of five words in the culture. The first two, *aqel* and *nafs* underscore the pervasive dichotomy between reason and passion. Their meaning is relatively straightforward and is as conveyed in the sentence, “Children are all *nafs* and very little *aqel*”. The third, *asel* means origin, patrimony, descent, authentic, proper or strong in character. Its importance lies in that

aspects of a person’s nature, origins and web of indebtedness tells another how this person is connected to others, how he is most used to forming affiliations, and how he is most likely to act in differing situations.¹⁰²

The fourth word is *hal* and it refers to context, situation, weather, state or condition. It is a word used for the individual as well as for collectives such as the nation state.

To know how another acts in a host of different contexts is central to knowing who another is.¹⁰³

Finally, we turn to a word whose importance in the culture is mirrored by its importance in the Quran. This is the word *Haqq* which means right and duty on the one hand and truth and reality on the other. In summary,

Individuals create networks of interpersonal obligation. The words and deeds of men and women are the central resource out of which these webs of indebtedness are forged. Language thus becomes not just an instrument for expressing the pre-conceived or the prearranged: it is one of the most critical resources by which one establishes one’s ties, one’s place and one’s self.

¹⁰¹See Rosen (1989).

¹⁰²See Rosen (1989).

¹⁰³See Rosen (1989).

The only thing that is surprising perhaps, is how thoroughly the emphasis on language as index and fabricator of the central facts suffuses the entire system of Islamic law and culture.¹⁰⁴

I present these statements so that I may view them in the context of the mathematical constructions that I have labelled ADMA and CNH. The relevance of the Cournot-Nash-Harsanyi construction is obvious.¹⁰⁵ It is clear that when a Moroccan (or indeed a Pakistani) is asked by another

where he or she is *really* from?

what is being enquired into is the agent's *asel* or *type* as formalized in the theory of games with imperfect information. The same set of ideas recur in Udovitch's discussion of the medieval Islamic Near East:

... the numerous references to custom, to proximate people and proximate information as criteria for the validity of economic behavior combine to form a thick, crowded web of "local knowledge" surrounding the operations of exchange.

Sale is a bilateral transaction which is concluded and made binding by offer (*ijab*) and acceptance (*qubul*). An exchange of words, and sometimes of gestures, precedes the actual exchange of goods. Even though, in the theory of Islamic religious law, some exchange was possible without direct, personal and verbal contract, the model and paradigm for a transaction is the *majlis*, the personal confrontation and face to face seance. It is as if the physical presence of both parties and their words not only confer validity on the exchange but also somehow guarantee its reliability, honesty and quality. [This] element of personal guarantee and oral testimony is suffused throughout Islamic legal and exchange practices.¹⁰⁶

Indeed, as Schacht points out,¹⁰⁷ the Arabic word *bay'*, denoting "to buy or to sell", originally meant the "clasping of hands to conclude an agreement". It was Adam Smith who was then led from this to clasp the invisible hand of an invisible market.

Referring to the Geniza documents of the eleventh and thirteenth centuries, Udovitch refers to the fact that more than fifty percent of the content of an average

¹⁰⁴See Rosen (1989).

¹⁰⁵It was also anticipated, as in Geertz (1978) and Geertz *et al.* (1979).

¹⁰⁶See Udovitch (1985).

¹⁰⁷See his entry on *bay'* in *The Encyclopaedia of Islam* E. J. Brill, (1936).

business letter is taken up with commercial information and gossip which frequently are not related to the precise business between the two correspondents. One can then understand how in an environment characterized by such an insatiable hunger for business information, *murabaha* transactions in which the quality of the product is guaranteed by the seller were not only possible but also made some sense. Nevertheless, it is clear that in the traditional Islamic market, both the acquisition and the withholding of information can be advantageous in exchange, instrumental in making a good deal and in achieving profit.

A natural question arises as to the manner in which the information about various aspects of exchange is to be expressed and made known. According to Abu Yusuf, one of the founders of the Hanafi school,

The criterion in all of these things is *urf* (custom).

All of this is summarized in a vocabulary which refers to *maarif*, known and therefore valid; to *majhul*, unknown and therefore invalid; and makes frequent recourse to *urf*, already referred to, and to *ada*, custom and usage. These words also highlight the importance of local component of this knowledge and raise an issue we have already discussed; namely, what is the nature of a "commodity" as well as the nature of the "agents" who are involved in the transaction of that commodity?¹⁰⁸ If I reach across to my discussion of a text, I can ask whether a commodity is a text?¹⁰⁹

11. ON MARKETS AND HUMANITARIAN SENSIBILITY

Human labour is a commodity which can both be rented and owned. It was the trade in this commodity that was abolished by the British Government in 1808, and thereby lead one to ask whether this abolition was "an advance in man's moral sense or, simply, a random outburst of altruism"?

among the three or four perfectly virtuous acts recorded in the history of nations?¹¹⁰

The beginning of the nineteenth century was a time when "when capitalist ideas were in the ascendant, and large scale production of all kinds of goods was beginning",¹¹¹ and it is the conjunction of these two events that leads one to suspect the

¹⁰⁸See Khan (1989) in which I argued for an approach to development economics that takes the notion of a "commodity" and of an "agent" as its starting point.

¹⁰⁹Sidney Mintz's text on *sugar* readily comes to my mind.

¹¹⁰Lecky (1886) as quoted in [Davis (1975), p. 353.]

¹¹¹See Temperley (1977).

altruistic solution.

How could the system – a highly successful system of large-scale capitalist agriculture, mass producing raw materials for sale in distant markets – be dismantled unless “capitalism” had something to do with it? If our reasoning leads to the conclusion that “capitalism” had nothing to do with it, the chances are that something is wrong with our reasoning.¹¹²

But this raises as many difficulties as it solves. If we understand by “capitalism” the ADMA construction, it is difficult to understand how a conception that extols the pursuit of individual self-interest could have contributed to the subverting of a system that was emerging as its crowning achievement.

Eric Williams contests that there is anything to explain. In his 1944 Oxford dissertation *Capitalism and Slavery*, he argues that the abolition efforts drew their vigour precisely from the fact that British capital gained from such an action. His contention has been disputed by Anstey and Drescher,¹¹³ and the reductive thrust of his claim has been blunted by Davis and, more recently, by Haskell.

The relevance of this work to my line of inquiry is clear. It gives me an entirely new perspective on *markets*. The attraction of perfect competition, a regime of free, unfettered and unregulated markets, lies not only in the abstract criteria laid out in context of the ADMA parable but also in something not easily quantifiable. *markets* are seen as instruments of “social control”, or as guardians of “ideological hegemony”,¹¹⁴ or as the determinants of *cognitive style*; in all of this, they regulate humanitarian sensibility.¹¹⁵

I do not have the space to go into the details of these ideas; what I would like to do instead is to present the solution offered by Haskell.¹¹⁶ Haskell does not put class interest in the driver’s seat but focusses instead on the observation that a regime of “free” markets circumscribes as much as it lauds the pursuit of individual self-interest. What is already implicit in the theorems dealing with the ADMA construction is the importance of the underlying polity that ensures, and hence intensifies and perpetuates, discipline. Promises have to be kept, contracts have to be adhered to, accounts to be maintained, property rights to be respected, local information not to be exploited – in short the game has to be played according to the rules and these rules themselves do not constitute individual strategies. Indeed,

¹¹²See Temperley (1977).

¹¹³For details, see Haskell (1985); Ashworth (1987) and the references therein.

¹¹⁴In addition to Davis (1966, 1975), see Lears (1975).

¹¹⁵In this connection, see also the essay titled *Rival Views of Market Society* in Hirschman (1986).

¹¹⁶See Haskell (1985, 1987).

in the terminology of this essay, it is the CNH construction that extols unbridled competition and it is for this construction that we have no satisfactory normative theorems.

Haskell also focusses on the market's pedagogical role in drawing attention to the remote and unintended consequences of one's actions. Once one understands that it is not the benevolence of the butcher or the baker from which society benefits, but from the single-minded pursuit of their interests, albeit in a well-defined and regulated setting, it does not take long for one to understand that changes in the demand for sugar change its price, and therefore the incomes, and living conditions, of those that produce it.

And it was ... specifically a change in the perception of causal connection and consequently a shift in the conventions of moral responsibility that underlay the new constellation of activities and attitudes. What altered *cognitive style* in a "humanitarian" direction was ... the expansion of the market, the intensification of market discipline, and the penetration of that discipline into spheres of life previously untouched by it. The defining characteristic of the "man of principle", the moral paragon of a promise-keeping market-centered form of life, was his willingness to act on principle no matter how inconvenient it might be.

My parable of the author deciding on the choice of texts is also relevant here. I assume and anticipate the context, and then by acting on my assumptions, create the context that I assumed in the first place.

More generally, my view of reality, by questioning the reality it is, helps change it; and in so doing, brings out who I really am. Haskell puts Putnam's correspondence, in both directions, between the "real world" and "values" in the following way:

.. the neo-Freudian tradition has prepared us to accept the idea that feelings influence perception. .. the reverse can also be true. The rise of antislavery sentiment would not have emerged ... if [it] had not been called into being by a prior change in the perception of causal relations.

It is the ADMA construction that led to the changed perception and thereby fueled the dynamism and activism of the abolition efforts.

12. CONCLUDING REMARKS

In this essay, I set myself three broad objectives: to document a shift in the

language of economic theory; to begin to draw the relevance of culture and cultural change to the understanding of economic "underdevelopment"; and to begin an exploration of the way markets and traders are viewed in Islam and Islamic culture.

The shift in the language of theory hinged on the change in emphasis from a conception of negligible agents, transacting with an impersonal and a universal market, to one in which agent interdependence, in a context of time and uncertainty, renders each agent significant and willing and able to exploit local information. In short, the shift hinges on the change in emphasis from the abstract ADMA construction to the equally abstract CNH construction.

Such a shift goes back to the end of the seventies and revolves along the work of several authors¹¹⁷ and several texts.¹¹⁸ This is not to say, however, that one construction totally eclipsed the other – both conceptions co-exist. Work in general equilibrium theory did not stop in the mid-seventies and continues today;¹¹⁹ the current interest in game theory took off on the basis of the progress made in the early fifties.¹²⁰ What is undeniable is that there has been an important change in emphasis and one which can be clearly documented in the language and its vocabulary.

As regards my other two objectives, I have presented several conceptions of the market so that we may obtain insight into one by seeing it from the vantage point of the other. The Quranic conception of markets becomes especially novel and interesting when it is contrasted with the hostile reaction to trade and traders in ancient Greek culture; or alternatively, when it is underscored by the opinions we hold on how trade and markets foster humanitarian sensibility. To take another example, the conception of trade and markets as a game of imperfect information, with its emphasis on ascertaining the "type" of player, becomes especially interesting when it is juxtaposed with a description of exchange and of the kind of transactions conducted in Islam and Islamic culture as manifested in contemporary Morocco or the medieval Near East. Alternatively, we can obtain insights into the processes of economic development when we view exchange in LDCs as a game of imperfect information, or in the context of Islamic countries such as Pakistan, when

¹¹⁷Akerlof, Holmstrom, Kreps, Myerson, Spence, Wilson readily come to mind; see the entries in *The New Palgrave* reissued as a separate volume titled *Allocation, Information and Markets*. Also see Khan (1989) for further references.

¹¹⁸The texts of Arrow-Hahn, Aumann-Shapley, Hildenbrand, Scarf and Rashid can be seen as the extension and consolidation of the apparatus presented in Sections 5 and 6 and comprehensively laid out for the first time in Debreu (1959).

¹¹⁹Indeed, the work summarized in Comet (1989) and Geanakoplos (1990) serves as an important example of research that continues.

¹²⁰To state the obvious, Cournot's work dates to (1838), that of Nash to 1951-52 and Harsanyi's seminal articles date to (1967). Also see Aumann's entry in *The New Palgrave* on the subject of game theory.

we are cogniscent of Islamic injunctions.

I have presented a variety of contexts that can be attached to the term *market*; it is clear that these need to be probed further, and supplemented further, by other contexts, spatial and temporal. What is essential is that we

juggle several descriptions ... without asking which one [is] right – to see redescription as a tool rather than a claim to have discovered essence. [I] see a new vocabulary not as something which is supposed to replace all other vocabularies, something which claims to represent reality, but simply as one more vocabulary, one more human project, one person's chosen metaphoric. [These metaphors] play into each other's hands, .. feed each others lines, .. rejoice in each others company.¹²¹

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¹²¹[Rorty (1989), p. 39.]

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Comments on* “On the Languages of Markets”

It is not easy to discuss Professor Khan’s paper in the absence of a paper. It is more difficult, however, to discuss a paper by Ali Khan. Ali Khan’s writing combines depth, rigor, technical mastery and erudition. The purpose of Ali Khan’s presentation is to examine capitalism as a value-free system. According to Khan, unnecessary confusion about capitalism arises by giving “own” meanings to “universal” concepts. The subject of his discussion could be traced through some of his recent writings, not all, to use Khan’s distinction are in an accessible “langue”. During the meeting Ali Khan gave me a recent paper of his that represents the main ideas of his talk to serve as the basis for my discussion.¹ In that paper Ali Khan makes the case “... for an interdisciplinary approach and propose situating the subject in the *broader context* of human sciences – les Sciences de l’Homme – in which methods of literary criticism, political and economic thought, history, philosophy, semantics, along with mathematical economics and behavioural social science, *all* provide points of departure and mutual reinforcement.” (emphases added.)

Two concepts play an important role in Khan’s constructs: philosophy and semantics. The utility of philosophy in Khan’s discussion is not confined to speculation which one hopes to see confirmed or refuted by science. Such single-minded search could either lead to pure dogmatism or pure skepticism – both imply certainty. Khan’s use of philosophy in his dynamic view of the world seems not to be a single-minded attempt to discover a Hegelian-type formula of progress to decide which are the features of the existing world that give him pleasure and which are those that give him pain ... and then “... by a careful selection among facts, persuades himself that the universe is subject to a general law leading to an increase of what he finds pleasant and a decrease of what he finds unpleasant” [Russel (1950), p. 9].²

Rather, it seems that Ali Khan’s use of philosophy goes deeper to questions such as those raised by Russell (1950): Has the “universe” a purpose? Or is “it” driven by blind necessity? Or is “it” a mere chaos and jumble in which the natural

*Owing to unavoidable circumstances, the second discussant’s comments on this paper have not been received.

¹M. Ali Khan (December 1990). *Distributive Justice and Need Fulfilment in an Islamic Economy: A Review*.

²Bertrand Russell (1950) *Unpopular Essays*. New York: Simon and Schuster.

laws we think we find are only a fantasy generated by our love of order? It is not difficult to turn these questions into Khan's economics by replacing the "universe" and "it" by "market" or the "invisible hand". Indeed Russell, when he posed these questions, was careful to "leaving aside, for the moment, all questions that have to do with ethics or with values" when he examined these "... purely theoretical questions, of perennial and passionate interest, which science is unable to answer, at any rate at present" (p. 25).

In discussing capitalism, Khan starts with a construct, a setting, a stylized economy, with a given finite number of perfectly divisible commodities and also a given finite number of consumers. These are characterized by a consumption set, a preference relation defined on that consumption set, an initial endowment and shares in the profits of producers. There is also a finite number of producers characterized by production sets. In the context of this Arrow-Debreu-McKenzie model, the economic problem of this stylized society is solved by allocation (consumption and production) mechanisms. Khan singles out four kinds of allocations: technologically efficient, Pareto optimal, core allocation and competitive allocation. A Lindahl allocation is compatible with competitive allocation when public goods, consumed equally by consumers are introduced. This basic theoretical construct according to Khan is "... value-free. All the italicized terms in (my) discussion can be defined with notions of rigor and precision current in modern mathematics. The propositions, in relying on rules of mathematics, are then as valid in Morocco as in Indonesia; as true in Damascus now as in the seventh century" [Khan (1990), p. 9]. We might add, in the spirit of Khan's statement, that the constructs are also ... as true in the present turbulent times of the oil market of war and environmental abuse (Alaska and the Gulf), in the recent collapse of the institutional base that governs the allocation mechanisms of European socialist economies, in systems of apartheid (South Africa), of serfdom (Germany of the 19th century), or of intolerable child labour practice (England's early industrialization). Nevertheless, the journey through the "Languages of Markets" becomes simpler once the initial theoretical propositions are accepted as valid across space and time. If we standardize on the "parole" and "langue" of the "market economy" by using mathematical symbols and relations, we can discuss the issues of "institutions" and "moral philosophy" with reason.

But is it possible to make a value-free distinction between a stylized static economy and the national and international political, military and social institutions that govern its spatial and temporal dynamics? Or are we falling in the philosophical trap that we aim to evade? Sometimes in my hopeful moments I contemplate that:

If we buy and sell . . . we must . . . for your good and mine
 lest my supply of toil . . . be less than your demand for wine and dine
 What we need is a model . . . that does more than tell:
 A "Universal" market . . . of death and life
 must exist . . . in every space and time
 We call capital "ism"!
 A model that costs the boundary to reach beyond:
 The knowledge to debate the "probable" roads ahead . . .
 Costs the absent in your mirror . . . the values in today's tomorrow
 But don't call it "ism".

Let me pose a few questions to illustrate and conclude. First, one of the great political ideas known to mankind is that of law and government. Clearly there must be some "law" to "govern" and guarantee the desired outcomes of those four kinds of allocation that define the working of capitalism. It is evident that of the two, government is the more fundamental, since government can exist without laws, but law cannot exist without government! We may simply define government as a concentration of the collective forces of a community that is able to control individual citizens and to resist pressures from foreign states [cf. Russell (1950)]. But what is the source of that control, how is it related to internal and foreign power, and how are laws that regulate society and the market being formulated and implemented? These are non-trivial questions.

A second question relates to the initial endowment of assets and power. Which is a value-free concept: accepting an initial random distribution of assets and power, or a redistribution based on a value consensus? Is the mathematically calculated loss of efficiency as a result of such redistribution to be considered a loss in the value-free sense? Put in philosophical terms: how could we differentiate between a "technical" and a "moral" society; or more generally, between "change" and "progress", where "change" may (but not necessarily) be scientific, while "progress" is by nature ethical and accordingly a matter of controversy?

Although not a student of philosophy, I must confess some uneasiness about Khan's contention of the "universality" of the "system", especially when he compares its truth with the statement ($2 + 2 = 4$). The proof of the universal truth of this last proposition has not been simple in the history of philosophy. Uncritical examination of such proof lead great philosophers to hold diametrically opposing views about the nature of the world. Spinoza on the one hand was lead to believe in the unity of God (Monism) while Leibniz on the other hand was lead to a theory of multiplicity (Monadism). Both analyses according to Russell³ were logically deficient. They were based on the universality of an abstract object or on that of

relations of space and time, but not on both. Clearly these must relate to different worlds: one where the objects are universal but not the relations, in the other the relations are but not the object, while in the third, both are. It must be emphasized that universals to be “universals” must not have empirical counterparts. If “2” refers to Ali and to Khan, then $(2 + 2 = 4)$ is not a “universal”. However, the models Khan advocates are based on inference of existing phenomena, and assumptions based on experience. The X’s and Y’s are not the “1’s and 2’s”, and the implied relations are not the “+’s”. They relate to empirically based entities: to consumers or producers, their “assumed” transformation and preference relations and to the rules and laws that “govern” the domain of their behaviour, and accordingly, strictly speaking, their treatment as “universals” may be questionable.

To continue our metaphor: there are “*n*” possible (random) distributions of initial endowments of assets and power that are “related” to different types of government and governance, that should produce “alternative” allocative solutions. To take the one that by chance existed at the time as “the” optimal seems to be either a Leibniz-Pangalosian type, or a Hegelian-type philogosophy – a value-laden deterministic-type! It also seems to evade the critical question of the “relation” between the initial distribution of endowments *and* the types of “laws” and “governance” that govern the “markets” of Capitalism – an underdeveloped area of investigation. This is a complex matter, however, and I am raising the issue partly because of my inadequate knowledge.⁴

These are some of the questions that Khan, in his search for a value-free analysis of capitalism, attempts to tackle. The issues he raised and the building blocks he put together have added to our appreciation of the complexity of the task.

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³Bertrand Russell (1912 and 1943) *The Problems of Philosophy*. London: Oxford University Press. It is of critical interest to notice that Russell acknowledged the contributions of Moore’s philosophy and J. M. Keynes’ contributions to probability and inductions.

⁴For a lively discussion of the evolution of semantics in British philosophy from Wittgenstein to Warnock, see Bryan Magee (1986) *Modern British Philosophy*. Oxford: Oxford University Press. And for a very brief but critical review of Western philosophical development, see Diane Collinson (1987) *Fifty Major Philosophers: A Reference Guide*. London: Croom Helm Ltd. I also find Bertrand Russell (1934) *Freedom Versus Organization 1814–1914*. New York: W. W. Norton and Company, Inc. a classic of great relevance to the present discussion.