# Conceptual Foundations of Antitrust

Oliver Black

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### **PREFACE**

That slim and dispiriting publication *Jobs for Philosophers* made particularly brief and dismal reading in 1987, when I got my philosophy doctorate. The ratio of available posts in university philosophy departments to the people applying for them was said to be about one to 300. Assuming therefore that, even if I found such a post, it would be temporary and in the sticks, I proposed to myself a choice of non-academic jobs: an easy one that would leave me the time and energy to pursue philosophy in my free time or a challenging one that would absorb the energy I would otherwise have spent on philosophy. Partly because challenging jobs tend to be better paid, I chose the latter. As philosophers often do, I picked the law, and I now practise antitrust law and regulatory law. (A colleague tried to persuade me to go into tax law on the ground that it is 'metaphysics with fees'.) The work is often challenging, but the philosophical itch persisted, so I have come to divide my time between law and philosophy. This book, a philosophical study of antitrust, thus connects my two halves.

The book is a mixture of new work and a reworking and expansion of earlier material: ancestors of the text are cited in the bibliography at the end. I am grateful to the friends and colleagues who have helped me form my thoughts: particular thanks go to David Papineau and Richard Whish (both at King's College London); to Bill Allan, David Bailey, Juliet Lazarus, Melat Negash, Carole Thomas and the late Dan Goyder (all now or formerly at Linklaters); and to Simon Evnine, Edmund Fawcett, Donald Franklin, Michael Grenfell, Donald Peterson and Jo Wolff.

I always groan when an author thanks his wife, children, dogs and goldfish for lovingly tolerating his reclusion. But I can't resist thanking Jenny, because she is such a new wife. There are no children or pets to thank.

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### INTRODUCTION

Antitrust is a body of law and policy designed to promote, or at least to protect, economic competition. There are many legal books and many economic books on the subject, but so far as I know there is no other book devoted to the philosophical scrutiny of the concepts that underpin it. The idea of a philosophy of antitrust may seem abstruse, but there is nothing puzzling about it. Philosophy may be conceived as a set of meta-studies associated with first-order disciplines: for psychology there is philosophy of mind, for mathematics there is philosophy of mathematics, for moral thinking there is philosophical ethics, and so on. (This is not to say that the boundary between a discipline and its philosophy is, or should be, sharp; for example, some of the most interesting work in ethics in recent decades has been by philosophers who have engaged with practical moral issues.) For law there is philosophy of law, and different parts of the law are associated with different branches of its philosophy: one such branch is the philosophy of antitrust.

The concepts studied in this book lie at the foundation of antitrust, but they are not peculiar to antitrust. Those of competition, agreement and joint action, for example, arise in various areas of theory and practice. I hope therefore that the book will interest people – economists, philosophers, political scientists and others – who have no special concern with antitrust. As to those who do have such a concern, the book is directed not only at academic readers but also at practitioners, in government, law firms, economic consultancies and elsewhere, who seek a deeper understanding of their discipline. Although the book's primary aim is theoretical, it may also be useful in practice: specifically, the models it proposes give guidance as to when a crucial concept can and cannot properly be applied. If, say, a situation diverges widely from the models of a concerted practice given in chapter 5, that is reason to think that it is not a concerted practice and to act accordingly.

Given the breadth of the intended readership, a word is in order about the style of presentation. I write in a manner that comes naturally to those trained in analytic philosophy: there are numbered propositions, attention is paid to their logical relations, and various schematic abbreviations are used, the most common being 'X', 'Y' ... for people, firms or groups; 'Ax', 'Ay' ... for their respective actions; 'Gx', 'Gy' ... for their respective goals; and 'P', 'Q' ... for sentences and propositions. The manner is not a mannerism: the alternative would be unbearable longwindedness, as if a book of mathematics were written exclusively in prose. But this book contains no mathematics and no one should be frightened by its symbols. Nor does it presuppose any knowledge of philosophy: on the few occasions when I use a philosophical term of art, I explain its meaning. If you find some passages too dense, you can skip them without losing your bearings, as each chapter starts with an extensive overview of the argument.

Here is a brief overview of the book. The concepts discussed appear, with variations, in all systems of antitrust, but because I practise English and European law I refer most frequently to legislation and cases in those jurisdictions (chapter 3 is the exception). The book can, in fact, be viewed as a meditation on Article 81 of the Treaty of Rome (hereafter 'Article 81 EC'), paragraph 1 of which says:

The following shall be prohibited as incompatible with the common market: all agreements between undertakings, decisions by associations of undertakings and concerted practices which may have as their object or effect the prevention, restriction or distortion of competition within the common market...

Thus chapters 1 and 2 concern competition; chapter 3 concerns its prevention, restriction or distortion; chapter 4 concerns agreements; chapter 5, concerted practices; and chapter 6, various forms of conduct that approximate more or less closely to a concerted practice.

Chapter 1 answers a question which theorists and practitioners of antitrust should consider more often: What is competition? The answer takes the form of a model of competition, the central idea being that X and Y compete where X achieves X's goal only if Y does not achieve Y's. The model allows a distinction to be drawn between competition and rivalry. I show how the model applies to economic competition and then use it to illuminate the relation between competition and two forms of cooperation: joint action and agreement. The discussion reveals some truth and some falsity in the claim that competition and cooperation are inherently opposed.

From competition's nature I move to its justification. The current orthodoxy is that competition is desirable because it maximises welfare.

Chapter 2, which differs from the other chapters in having a purely negative purpose, attacks the orthodox view. The argument is that 'welfare' has either a meaning in which welfare is valuable but competition does not maximise welfare, or a meaning in which competition does maximise welfare but the fact that it does so is no *justification* for competition, because welfare in this sense is not worth maximising.

Antitrust is hostile to restrictions on competition, but to be workable it must be selective in the restrictions it prohibits. In the United States, principles of selection are embodied in the doctrine of per se rules and rules of reason. There is a debate whether antitrust in the European Community does, or should, have a similar doctrine, and in the US itself there is a debate as to the proper scope of per se rules and rules of reason. Chapter 3 aims to clarify these debates by analysing the two kinds of rule and identifying the relations between them.

The rest of the book is concerned with various forms of bilateral conduct. Chapter 4 presents two models of agreement which develop the idea that an agreement exists where one party gives a conditional undertaking and the other responds with an unconditional undertaking. The models accommodate plausible justifications for making and complying with agreements. I then examine the distinction drawn in Article 81 between the object and the effect of an agreement, assessing different views of this distinction by comparing them with what I call the Intuitive View: this is that the object limb of Article 81 catches agreements which the effect limb does not catch (and vice versa) but that, often at least, object is evidence for effect (but not vice versa). The final part of the chapter discusses the concept of a dishonest agreement, introduced into UK antitrust by the Enterprise Act's 'cartel offence'. The account of dishonesty in the leading case, *Ghosh*, falls to objections of circularity. I conclude that the concept of dishonesty would be best deleted from the cartel offence.

To be effective, antitrust must apply not only to formal contracts but also to looser understandings: that is why Article 81 mentions not only agreements but also concerted practices. Chapter 5 presents two models of a concerted practice, one applying ideas from the philosophy of language, the other based on the concept of reliance, which is modelled in turn. The claim is that reliance is the core, and concerted practices are instances, of joint action. I show that joint action and agreement are distinct phenomena and hence that it is misleading to conceive of concerted practices as a pale kind of agreement. The two models converge in two respects: both imply that concerted practices involve communication between the parties and neither implies that they involve obligations. In the first respect the models are consistent, and in the latter inconsistent, with legal

authority, but I maintain that the authority for the thesis about obligation is confused and misleading. The argument that concerted practices on the second model do not involve obligations is based on the proposition that there is no interesting relation of conditionality connecting reliance and moral obligation. This proposition, which is important to many areas of law, is defended in the appendix to the chapter.

Antitrust must deal with a spectrum of situations running from independent action to collusion. Different types of intervention are appropriate to different points on the spectrum. In the middle are cases that create the 'oligopoly problem' – the fact that oligopolists may display parallel behaviour that is anticompetitive but results from individual decisions by the parties. One question is whether the types of intervention, such as application of Article 81, that are fitted to the collusive end of the spectrum can be extended to such cases. To reach a principled answer, an understanding is needed of the spectrum itself. Chapter 6 models the spectrum in a way that shows where various kinds of conduct fall on it and how they are related to each other. The results are applied to introduce some terminological order and to illuminate the oligopoly problem and the related concept of 'coordinated effects' as that concept is used in the European Commission's Guidelines on horizontal mergers.

It is obvious from this summary that the book does not purport to cover all the important concepts that underpin antitrust: I have selected those that interest me most. Some readers may regret the lack of attention given to unilateral conduct: the methods of dealing with such conduct are currently much discussed, as theorists and practitioners try to reconcile the complexities of economic reality with the often crude jurisprudence. (The recent judgments of the Court of First Instance in the *British Airways* and *Michelin II* cases show how much the Court has to learn about the economics of incentive arrangements.) But, although the antitrust of unilateral conduct is interesting, its interest does not strike me as distinctly philosophical: hence its omission from this book.

It is worth making some methodological remarks about the various models that are presented. These models – of competition, agreements, concerted practices and so forth – are intended only to represent central cases of central concepts: for example there may be other concepts of competition (and the boundaries between them may be hard to draw). Moreover, for any given concept, a model of this kind need not purport to specify necessary and sufficient conditions for every application of the concept; accordingly it should not be rejected merely if a case can be found that either does not fit certain clauses of the model or has certain features.

relevant to the concept's application, that the model fails to capture. It is debatable whether illuminating necessary and sufficient conditions can be given for any concept, but the aspiration to specify them is quixotic in the case of concepts, such as the ones at issue here, which have been described and applied in obscure, confused and arguably contradictory ways. For such concepts a model may be treated as prescriptive, regimenting our intuitive judgments. Nevertheless it is a virtue of a model that it should fit those judgments, and it must be rejected if it diverges from them too often or too widely. The aim should be, in Rawls's phrase, a reflective equilibrium of intuition and theory.

# What is competition?

### Overview

It is a scandal of antitrust that neither its practitioners nor its theorists agree – in so far as they consider the question at all – on what competition is. Opportunistically, insouciantly or ignorantly, we still lurch among the five definitions that Bork identified decades ago: the process of rivalry; the absence of restraint over one firm's economic activities by another firm; the state of the market in which the individual buyer or seller does not influence the price by his purchases or sales; the existence of fragmented industries and markets; and – Bork's preferred definition – a state of affairs in which consumer welfare cannot be increased by moving to an alternative state of affairs through judicial decree. One response is to say that the plurality of definitions does not matter, because actions promoting or protecting one kind of competition promote or protect all the others. But there is no reason to believe that that is so. Another response is to say that we need different definitions in different contexts - say, cartels and mergers. But that by itself is unsatisfactory, for it fails to identify significant connections between the definitions. We must hope that there are such connections; otherwise antitrust is as incoherent as would be a body of law and policy that concerned banks and covered both financial banks and river banks.

The first of Bork's definitions differs from the others in that, broadly, it describes a form of behaviour whereas they describe economic structures. In this respect the first definition captures one of antitrust's concerns: although, as a result of Bork's work and that of other members of the Chicago school, it is now widely accepted that the main aim of antitrust should be to maximise welfare,<sup>2</sup> it is also believed that this aim is to

<sup>&</sup>lt;sup>1</sup> Bork (1978), 58 ff. 'Competition' is used in the sense of 'rivalry' in Bork (1966), 377, fn. 5. The variety of meanings of 'competition' in the economic context is also discussed in Bishop and Walker (2002), ch. 2.

<sup>&</sup>lt;sup>2</sup> Other aims that have been pursued in the name of antitrust are reviewed in chapter 3.

be achieved, at least in part, by encouraging competitive behaviour.<sup>3</sup> Means and end, thus described, are taken not to be trivially connected by definition: 'competitive behaviour' is understood not to mean whatever behaviour conduces to welfare,<sup>4</sup> but to identify a type of behaviour that can be identified otherwise than by its effect on welfare. An illustration of this approach is the UK Office of Fair Trading's introduction to the 'substantial lessening of competition' test under the Enterprise Act 2002:

The OFT views competition as a process of rivalry between firms seeking to win customers' business. This process of rivalry, where it is effective, impels firms to deliver benefits to customers in terms of prices, quality and choice.<sup>5</sup>

The purpose of this chapter is to identify the behaviour in question. I propose a model of competition, in the sense of competitive behaviour, which applies both to economic and to other kinds of competition. The central idea is that X and Y compete where X achieves X's goal only if Y does not achieve Y's. The model shows that distinctions are blurred by identifying competition with rivalry, as Bork and the OFT do. After setting out the model and comparing it with another account, I consider factors that other authors have associated with competition, and for each factor I show that the model already incorporates it or can be expanded, or does not need, to incorporate it. The factors are simultaneity; scarcity; chance, uncertainty, or lack of knowledge, as to the outcome; a distinction between 'title' and 'possession', or between 'prize' and 'jungle', competition; a distinction between those goals that are constitutive of and those that are

<sup>&</sup>lt;sup>3</sup> In Fielding's terms, welfare is a social ideal (possibly only an intermediate one) and competitive behaviour a procedural device: Fielding (1976), 137. See also Simmel (1955), 72, on competition as a technique, and Prvulovich (1982), 81, on competition as a device for distribution and selection. Fielding distinguishes competition as a procedural device from the act of competing: the former might be conceived as consisting of widespread cases of the latter. Compare Wolff (unpublished), where it is argued that the only plausible justification for the harm caused by competitive behaviour in the economic sphere is consequentialist in form and that this poses a problem for those who defend competition from a standpoint of deontological libertarianism. Wolff's consequentialist approach echoes Simmel's: Simmel (1955), 79.

<sup>&</sup>lt;sup>4</sup> But Bork (1978) appears to understand it to mean this. Bishop and Walker use effect on welfare as a 'benchmark', but not as a 'formal definition', of *effective* competition: Bishop and Walker (2002), para. 2.51. 'Whether a market is characterised by effective competition or not . . . depends on the outcomes it produces': para. 2.10.

Office of Fair Trading (2003b), 15. A similar view of competition as a form of behaviour is expressed in Competition Commission (2003a), para. 1.20, (2003b), para. 1.16. Feltkamp (2003) takes the same approach in relation to the EC state aid rules.

external to the competitive situation (I argue that in economic competition the goals are mainly external); the various attitudes that competitors may have; and a distinction between willing and unwilling competition. Then I show the model's suitability for the purposes of antitrust, by explaining how it applies to various forms of economic competition.

The final section discusses the relation between competition and certain forms of cooperation, namely joint action and agreement: this discussion reveals some truth and some falsity in the claim, used by certain writers to attack competition, that competition and cooperation are inherently opposed. I shall argue that, on certain conditions, competition and joint action are incompatible and that competition is compatible with making an agreement but not with complying with one. Here I touch on the justification of competition, but this chapter is primarily concerned with what competition is, not with the reasons for promoting it. Justification will be the subject of chapter 2.

### The model

The Introduction's general remarks about models – in particular, that they are intended only to represent central cases of central concepts, not to specify necessary and sufficient conditions, and that they should aspire to fit our intuitive judgments – apply to the present model.<sup>6</sup> In the case of competition the standard of fit with intuition may justifiably be set fairly low, to accommodate the fact that the concept's application in economics has a theoretical dimension absent from its everyday uses: this is preferable to the despairing conclusion that 'competition' in economics has become a term of art that has broken away from ordinary usage (compare the point above on the connections between Bork's definitions).

For simplicity the discussion will be restricted to competition between two parties (it can be easily extended to cases where they number more than two), who may be individuals, firms or groups: X and Y compete

<sup>&</sup>lt;sup>6</sup> The model is thus invulnerable to Fielding's strictures on 'essentialism': Fielding (1976), 125–8; see also K. Kim (1991), 300. Fielding might object to the model on other grounds he discusses, that it ignores the normativity, the historical dimension and the essentially contested nature of the concept of competition. The only reason he offers for the view that the concept is normative is that people have held normative beliefs about competition (133–4) – which is a non-sequitur. I do not deny that the concept has developed over time and I am agnostic as to whether it is essentially contested: these questions do not affect the utility of the model. As to the concept's historicity, McMurtry (1984), 45, notes that the etymological sense of 'competition' is 'seek together', a sense which associates competition and cooperation (see further below).

with each other tout court if and only if there are actions Ax and Ay by which, and goals Gx and Gy in respect of which, they compete with each other. This formulation accommodates the obvious point that they may compete with each other in some respects but not others. The actions and the goals are connected in that, standardly, each person performs his action with the intention of achieving his goal.7 'Action' should be read broadly, to cover courses of conduct and other forms of durée that may or may not be readily parcelled into discrete actions.8 'Goal' also has a broad sense, in which the achievement of an action's goal need not be distinct from, and specifically need not be an effect of, the action itself: for example, I give you a present with the goal of showing my affection for you. In such cases I achieve the goal *in* performing the action; I achieve it by performing the action where the action causes the achievement of the goal. Goals and intentions are distinct from results<sup>9</sup> and motives:10 from the motive of hatred, I reprimand you with the intention of achieving the goal of humiliating you, which I fail to achieve. In some cases it is unclear what the agent's intention and goal are: the obvious course is to ask him, but he may be unable to give an articulate reply.

I shall take 'X and Y are in competition with each other' to be another way of saying that X and Y compete with each other. But X and Y may be in competition without being in a competition: the two examples to be given shortly are cases in point. Certain branches of antitrust – specifically the rules on procurement by public bodies and utilities – concern competitions, rather than just competition; but competitions are not the concern of antitrust generally, so I shall not distinguish them further. MacCallum's 'title' model of competition, discussed below, gives a fair characterisation of a competition. 13

<sup>&</sup>lt;sup>7</sup> See Harman (1986), 97. <sup>8</sup> See Giddens (1984), 3.

<sup>&</sup>lt;sup>9</sup> Simmel (1955), 57–60, stresses the distinction between the goal and the result of competition. Compare the distinction between object and effect in Article 81 EC, discussed in chapter 4 below.

Mead (2003), 16, blurs the distinction between goal and motive. On competition as a motive, see the discussion of Fielding at the end of the next section.

<sup>&</sup>lt;sup>11</sup> Dearden's account, discussed later, uses the former locution where mine uses the latter: Dearden (1972), 120.

<sup>12</sup> Compare Kleinig (1982), 164-5, where it is said that 'to compete' can mean either 'to take part in a competition' or 'to act competitively'.

The table in MacCallum (1993), 217, lists title competition's indicia. Acton's description of 'jungle' competition includes an additional feature characteristic of competitions, that the winner is determined by an awarding authority: Acton (1993), 69. See also the account in Brownson (1974), 229, of competition in schools.

The core of the model is this:

X competes with Y where there are actions Ax and Ay and goals Gx and Gy such that:

- (1) X does Ax with the intention of achieving Gx;
- (2) Y does Ay with the intention of achieving Gy; and
- (3) X achieves Gx only if Y does not achieve Gy. 14

(Here and elsewhere in the book I use the timeless present tense to cover a variety of temporal relations: where the timeless present is used in a clause of a model, it is to be read as allowing substitution-instances in different tenses. Here there is no implication that Ax and Ay are simultaneous – a point taken up below.)

For example X proposes to Z with the intention of making Z his wife; Y sends flowers to Z with the intention of making Z his lover; and, because Z is faithful by nature, she will be X's wife only if she will not be Y's lover. An economic example: X runs an advertising campaign with the intention of getting a 70 per cent share of a certain market; Y starts a research programme with the intention of getting 60 per cent of that market; and X will get 70 per cent only if Y will not get 60 per cent. Later I shall consider economic cases that are harder to fit to the model.

Different relations between X's achieving Gx and Y's not achieving Gy will ground (3) in different cases. In the first example the relation is causal: roughly, Z's not being Y's lover is a necessary causal condition of Z's being X's wife. In the second example the relation is entailment: it is arithmetically impossible for market shares to sum to more than 100 per cent. 'Only if' in (3) has a sense stronger than in elementary logic, for in the latter sense (3) makes the uninterestingly weak claim that either X does not achieve Gx or Y does not achieve Gy. Below I shall assume that 'Q if P', and equivalently 'P only if Q', entails 'It is not possible that both P and not-Q'; beyond that I shall rely on an intuitive understanding of conditionality. If (3) is true, so is its converse: Y achieves Gy only if X does not achieve Gx. Competition is thus symmetric. 15 One variant of

<sup>(3)</sup> expresses the 'mutually exclusive goal attainment' by which Kohn defines what he calls 'structural' competition: Kohn (1992), 4. Compare Berkowitz (1962), 178; Deutsch (1973), 20; May and Doob (1937), 6. Kohn later, and seemingly by a slip, substitutes 'if' for 'only if', describing a competitive situation as one in which 'I succeed if you fail, and vice versa' (136). In a situation of this kind one or other party must succeed; that is not true of competition in general. Compare the discussion below of variants of (3).

To say that a relation is symmetric is to say that, if A bears it to B, B bears it to A. In ecology one organism is said to compete with another where the first limits the second's resources:

(3) replaces 'only if' by 'if and only if': the model then describes a form of competition in which either X or Y succeeds. Another restricts (3) to say that X achieves Gx, in or by doing Ax, only if Y does not achieve Gy in or by doing Ay: this incorporates a feature of certain forms of competition governed by rules, Ax and Ay being actions that the rules permit. These variants limit the model to subclasses of competitive situations. A variant that, at the price of vagueness, extends the model's scope substitutes something weaker for 'only if': thus (3) could be revised to say that Y's achieving Gy makes it hard or harder – possibly in specified respects – for X to achieve Gx. On this version competition is not symmetric, unless it is added that X's achieving Gx also makes it hard or harder for Y to achieve Gy.

It is plausible to hold that, at least in many cases of competition, the parties have the same goal:<sup>16</sup> in the first example, although X wants Z to be his wife, and Y wants her to be his lover, each wants her to be his sexual partner; and, in the second, although X wants 70 per cent of the market and Y wants 60 per cent, each wants a majority share of the market. This thought motivates the addition of another clause to the model:

### (4) Gx = Gy.

But it is often uncertain whether the parties' goals are the same. Apart from the fact, already noted, that people may be inarticulate as to their goals, the criteria for identifying and individuating goals can be unclear. The fact that each party may have several goals causes no difficulty: if X and Y compete, in the sense of (1)–(3), in respect of various goals, only some of which they share, they meet (4) in the case just of the shared goals. But, even if each party competes in respect of only one goal, it can be hard to tell whether their goals are the same. Suppose that Z requires 100 widgets, that X's goal is to supply Z with 80 per cent of his requirement and that Y's goal is to supply Z with 80 widgets: 80 per cent of the requirement

Cooper (1993), 361. Competition in this sense is non-symmetric: it may be that X limits Y's resources but Y does not limit X's. The sense is an extended and technical one which my model does not purport to capture: ecological competition can exist among inanimate things and thus need not involve actions, intentions or goals. Compare the statement in Ong (1981), 43, that 'competition' suggests interaction between conscious beings. On other logical properties of competition – specifically the questions of transitivity and irreflexivity – see below.

Michelman (1983), 82, says that in the economic context 'competitors seek the same orders, the same resources, the same employees'. Simmel (1955), 57, speaks of competition as consisting of parallel efforts by the parties 'concerning the same prize'.

equals 80 widgets, so do X and Y have the same goal? The question can be important in antitrust, for the authorities are more likely to prohibit an agreement to supply a certain proportion of a party's requirement than to prohibit one to supply a specified volume: <sup>17</sup> the reason – not a strong one – is that the former is exclusionary on its face whereas the latter is only contingently so.

The answer to the question is no. If the goals are the same, then, if X has the goal of supplying 80 per cent, he has the goal of supplying 80 widgets. In that case - assuming, as mentioned, that 'Q if P' entails 'It is not possible that both P and not-Q' - it cannot be that he has the first goal but not the second. But this statement of impossibility is false, so the goals are not the same. It is false because 'X has the goal of . . ., and similar phrases such as 'X's goal is to . . .,' are intensional contexts. What that means is this: suppose that the dots are filled in to make a complete sentence and that among the added words is an expression with a certain denotation: substitution of another expression with the same denotation may change the truth-value of the sentence. The phrases '80 per cent of Z's requirement for widgets' and '80 widgets' do not mean the same but they have the same denotation, 18 so substitution of the latter for the former in 'X has the goal of supplying 80 per cent of Z's requirement for widgets' may change the sentence from true to false (assuming there are no other factors to preclude the change). Thus it is possible that X has the goal of supplying 80 per cent but does not have the goal of supplying 80 widgets. That these contexts are intensional can be seen from an analogous case: Oedipus's goal was to kill the offensive traveller, 'the offensive traveller' has the same denotation as 'Oedipus's father', but Oedipus did not have the goal of killing his own father. A weak sense of 'goal' might be admitted in which the contexts are not intensional, but that sense is not the one in the model.

Suppose now that both X and Y have the goal of supplying Z with 80 per cent of his requirement: here it appears clear that they have the same goal. But it may be objected that the appearance is due to an imprecise representation of their goals. The goals are more precisely represented by 'that'-clauses: X's is that he supplies Z with 80 per cent, Y's is that he supplies Z with 80 per cent. These, it may be said, are different goals as

<sup>&</sup>lt;sup>17</sup> Case 85/76, Hoffmann-La Roche & Co. AGv. Commission [1979] ECR 461; [1979] 3 CMLR 211.

There is a large philosophical literature on the distinction between meaning and denotation; the modern discussion starts from Frege (1952). The denotation of the two phrases in question is all sets of 80 widgets.