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Deconstructing Chicago on Exclusive Dealing

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Abstract:
While exclusive dealing can be efficient, the Chicago School has also argued that it cannot be anticompetitive, or that it seldom is. That argument takes two forms; both are weak. First, a price-theory argument ("the Chicago Three-Party Argument") depends crucially on a special model of oligopoly and predicts that we will never see what we see. I show how simply replacing the embedded oligopoly model suggests new efficiency and anticompetitive motives for exclusive dealing; these motives differ markedly from those usually discussed. Second, "the Chicago Vertical Question" is a challenge to theories of anticompetitive vertical practices, including exclusive dealing. While that Question is salutary and helpful, its apparent force dissipates if we pay careful attention to externalities, as others have noted, and to the issue of alternatives versus benchmarks, as I describe below. Overall, economic logic does not support any general presumption that exclusive dealing is efficient.

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Deconstructing Chicago on Exclusive Dealing[1]

Joseph Farrell[2]

March 2005

Summary: While exclusive dealing can be efficient, the Chicago School has also argued that it cannot be anticompetitive, or that it seldom is. That argument takes two forms; both are weak. First, a price-theory argument ("the Chicago Three-Party Argument") depends crucially on a special model of oligopoly and predicts that we will never see what we see. I show how simply replacing the embedded oligopoly model suggests new efficiency and anticompetitive motives for exclusive dealing; these motives differ markedly from those usually discussed. Second, "the Chicago Vertical Question" is a challenge to theories of anticompetitive vertical practices, including exclusive dealing. While that Question is salutary and helpful, its apparent force dissipates if we pay careful attention to externalities, as others have noted, and to the issue of alternatives versus benchmarks, as I describe below. Overall, economic logic does not support any general presumption that exclusive dealing is efficient.

I.   INTRODUCTION

One popular way to frame the antitrust analysis of a vertical practice such as exclusive dealing is to assess the probability that it serves efficiency. When exclusive dealing is observed, is it aimed at efficiency or at limiting competition? Statisticians use Bayes' Rule to make inferences about such competing "hypotheses." Bayes' Rule states that the evidence should shift one's assessment in proportion to the likelihood ratio: the likelihood of observing this practice if the parties are seeking efficiency, divided by the likelihood of observing it if they are seeking to exclude competition.

Despite some fundamental problems,[3] this Bayesian metaphor captures at least part of the way that antitrust debate considers whether we can adduce credible efficiency arguments and whether we can adduce credible anticompetitive theories. In the context of exclusive

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[3] For instance, the hypotheses are neither exogenous nor cleanly distinguished (P may well be chosen for a mixture of both reasons); moreover, our final goal is not assessing motives but comparing what will happen if P is forbidden. As the latter point suggests, this touches on the touchy question of the role of intent evidence in antitrust, on which I'll merely note that market participants may know more about the likely effects of their conduct than a court, and intent can informatively signal beliefs.

dealing, the Chicago School addressed both the numerator and the denominator of the likelihood ratio. That is, it both helped us understand how exclusive dealing can be efficient (tending to raise the numerator), and also challenged naïve presumptions that exclusive dealing is anticompetitive (tending to lower the denominator). In section II below I show why one major strand of the latter contribution is weak and illogical.[4]

Nevertheless, in exclusive dealing as in other vertical matters, the Chicago position is a very helpful clarifying framework. Some economists concur with its generally laissez-faire conclusion; others, including myself, are struck by its deficiencies but nevertheless find it useful to demand that a "theory of the (vertical) case" address the Chicago Vertical Question: if the agreement harms the buyer, why does he agree to it? In section III below I address this salutary challenge of the Chicago Vertical Question (CVQ).

While the CVQ might sound devastating to theories (for instance) of anticompetitive exclusive dealing, deconstruction of its implied syllogism reveals yawning gaps. In particular, the buyer who is harmed need not be the buyer who agrees; and even if he is, his rejected alternative need not be the relevant performance benchmark.

Because the best-known gaps in the CVQ's syllogism involve game-theoretic coordination failures, some observers might think the only gaps are subtle ones. Sliding from "subtle" to "delicate" to "implausible," such observers might infer that we needn't worry much about exclusive dealing, and may then approach complaints with incredulity rather than with healthy skepticism.

II.   THREE-PARTY ANALYSIS OF EXCLUSIVE DEALING

Suppose a buyer B can negotiate with an incumbent seller S concerning possible exclusivity. If they do not agree on exclusivity, an entrant E will compete against S to serve B. If they do agree, E can't serve B.

Quite generally, such a model inherently *cannot* find harmful effects on the buyer B: whatever B agrees to must by assumption benefit him, relative to the alternative that he rejects. We will return to this point below in discussing alternatives versus benchmarks. First, we address the model on its own terms.

A.   THE CHICAGO THREE-PARTY ARGUMENT AND ITS DEFECTS

The **Chicago Three-Party Argument** (C3PA) assumes (a) that B and S negotiate efficiently in the bilateral sense, meaning that they agree on exclusivity if and only if doing so increases their *joint* surplus, (b) that they cannot negotiate a binding product-market price or trading quantity at this stage (so that under exclusivity the product-market price will be the monopoly price), and (c) that E cannot pay B up front to refuse S's exclusivity offer.

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[4] This paper largely describes existing economic literature, but this part is (as far as I know) new.

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The C3PA further, and crucially, assumes (d) that if E enters, the post-entry competition between S and E is undifferentiated Bertrand competition. If E is less efficient than S then this constrains S's price to E's cost. E gains nothing from entry but its presence brings the trading price faced by B toward S's cost.[5] If, on the other hand, E is more efficient than S then E will (if allowed) displace S and price at S's cost,[6] giving B and S the same levels of surplus as they would get if S supplied B at cost.[7] Thus, in any event, B and S individually (and thus *a fortiori* jointly) get the same levels of surplus as they would from trading at a price that (a) is never below S's cost and (b) is lower than S's monopoly price—always weakly, and strictly so unless S has a drastic cost advantage over E, in which case the whole issue is moot.   Simple price theory tells us that their joint surplus is therefore no less than, and generically greater than, what they derive from the monopoly that results from exclusive dealing. This is simply the familiar Econ 101 lesson that total joint surplus is (normally) higher when price is closer to cost, and is maximized when price is at (marginal) cost.

Thus the model predicts that parties never agree to exclusive dealing; but in fact sometimes they do. What can we learn about the effects of a practice P from a model that predicts that P never happens?

One possibility is that, contrary to appearances, P never happens. The other possibility, much more credible here, is that the model is missing something. A laissez-faire spin is that this something must be an efficiency benefit from exclusivity. There can indeed be such benefits, so one could logically draw that inference *if* all conceivable anticompetitive motives for exclusive dealing were fully represented in the model and thus shown not to work. But the latter is very far from the case, as we will see.

Thus the C3PA model *in itself tells us nothing* about whether exclusive dealing is efficiency-based or anticompetitive. If we ask whether such an agreement can harm B, the C3PA assumes that it can't (by assuming that B can just say no). And it tells us nothing about the overall efficiency effects of exclusive dealing, because it says that exclusive dealing won't happen, thus denying both efficiency and anticompetitive explanations: in Bayesian terms it gives the likelihood ratio as an unhelpful 0/0. The laissez-faire spin often put on the C3PA relies on (rightly) noting that there can be efficiency rationales outside the model *and* on (wrongly) failing to note that there can be anticompetitive rationales outside the model. If one did the reverse, one would emerge with the equally unhelpful claim that, because the C3PA fails to find efficiency effects of (or motives for) exclusive dealing, it must be anticompetitive. And if one adduces both sets of out-of-the-model possibilities, one emerges with…both sets of out-of-the-model

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[5] As a result, if such unsuccessful entry incurs even a small cost, it will not happen, but I follow the C3PA here in assuming no such sunk cost of entry.

[6] For simplicity here I ignore issues of marginal versus average cost. Douglas Bernheim and Michael Whinston, "Anticompetitive Exclusion and Foreclosure Through Vertical Agreements," manuscript (2000), note that this is the most credible of the equilibria in the subgame; the others strengthen the argument.

[7] The argument is modified if E has a drastic cost advantage over S, but the conclusion is the same.

possibilities. The C3PA is a Rorschach test, and the inference often drawn from it is mere spin.

B.   THREE-PARTY ANALYSIS WITH OTHER POST-ENTRY OLIGOPOLY MODELS

As noted above, in the C3PA's undifferentiated Bertrand model of product-market competition, entry by E hurts S, benefits B by more, and confers a net benefit on S and B jointly, so B and S jointly don't want to discourage entry by E. But in many oligopoly models, E's private incentive to enter is excessive, or (equivalently) entry causes a net negative externality, benefiting B but hurting S by more.[8]   Indeed, Mankiw and Whinston (1986) argue that this is not merely common but the norm, except where product differentiation between S and E is strong.[9]

With Cournot competition, for instance, if B's demand is linear ($p = 1 - Q$), and if S's unit cost is c and E's is e, then simple calculation shows that B and S jointly lose from E's entry if and only if $1 - 2c - 3c^2 + 8ec - 4e^2 > 0$.[10] They then have a joint incentive to agree to exclude E. This is always the case if $e \geq c$, but it can also readily happen with $e < c$, so it is not just a matter of excluding productively inefficient rivals (not that productive efficiency normally is, or should be, the sole focus of antitrust). Farrell and Shapiro (1990) find general (within the Cournot model) formulae for the net externality produced when one firm E observably changes its marginal cost; this directly gives us the joint incentive for B and S to craft deals that slightly raise E's costs. Since vertical contracts often make it harder, but not impossible, for E to trade, it is helpful to be able to analyze such partial "exclusion" or "raising rivals' costs;" it is wrong to suggest (as the trial court did in *Dentsply*, reversed by the appeals court) that literal exclusion is

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[8] While actual entry may well hurt B and S jointly, limit pricing under the threat of entry is very apt to benefit them jointly; exclusive dealing presumably removes both effects.

[9] N. Gregory Mankiw & Michael D. Whinston, "Free Entry and Social Inefficiency," 17 RAND Journal of Economics (1986), 48-58. (Mankiw and Whinston show that the equilibrium number of firms can fall at most one short of the efficient number, but recognize that the associated welfare losses may not be small.) But the argument that equilibrium entry is "often" excessive is not really central: if B and S reach a mutually beneficial exclusive-dealing agreement, one can infer that they expect a negative net externality from entry (although see the discussion of the Aghion-Bolton model below); hence, whether or not such a negative externality is the norm in some universe of cases, it makes little sense to use a model in which no such externality can exist. Curiously, Mankiw and Whinston (1986) is cited in Segal and Whinston (2000)'s discussion of how exclusive dealing can be efficient (by providing better incentives for non-contractible investments), but not in Bernheim and Whinston (2000)'s discussion of how bilaterally efficient exclusive dealing can be anticompetitive (through a range of externalities). See Ilya Segal & Michael D. Whinston, "Exclusive Contracts and Protection of Investments," 31 RAND Journal of Economics (2000), 603-633, Winter; B. Douglas Bernheim and Michael Whinston, manuscript 2000, cited supra. On entry incentives and externalities see also Marius Schwartz, "Investments in Oligopoly: Welfare Effects and Tests for Predation," 41 Oxford Economic Papers (October 1989) 698-719.

[10] This expression assumes that c and e are close enough, and sufficiently below 1, that both firms will be active in the post-entry market: $c \leq [1 + e]/2$ and conversely. With Cournot competition, if E is not active then its entry makes no difference.   And if S is not active after E's entry ($c > [1 + e]/2$), then a different condition will apply, but again (i) if E is productively less efficient than S then E's entry hurts B and S jointly but (ii) B and S jointly can be hurt by E's displacing S even if E is productively more efficient than S (in contrast to the undifferentiated Bertrand case).

necessary for anticompetitive effect. Moreover, one can sometimes use the formulae for incremental (marginal) effects to analyze entry/exit and other discrete changes as cumulations of incremental changes.[11]

Perhaps paradoxically, a negative net externality from entry can create *both* efficiency justifications for exclusive dealing *and* motives for anticompetitive (in the sense of efficiency-reducing) exclusive dealing. To understand this, write Π for E's profits from entry, and write ΔW for the effect on total surplus. The negative net externality means that $J = \Delta W - \Pi$, the joint impact on B and S, is negative; this and the condition $\Pi > 0$ for E to wish to enter are consistent with two interesting possibilities:

1. *Entry is inefficient*: $J = \Delta W - \Pi < \Delta W < 0 < \Pi$. That is, while E would (profitably) enter, total economic surplus would fall. *A fortiori*, B and S jointly would lose from entry. If they agree to stop it, that agreement improves total economic surplus in the model; one might thus call it an efficiency rationale for exclusive dealing. Note that this differs from the efficiency rationales most often discussed such as improving incentives for S or B to invest in the relationship. Here, the efficiency gain is not an increase in the surplus available to be shared by S and B, related to a shift in their incentives as a result of excluding E, but rather is the reduction in competition itself.[12] Such "entry is inefficient" arguments have surely been much abused and are often viewed skeptically in antitrust, and it would probably be a real challenge to defend a deal between B and S whose sole "efficiency benefit" was this. It might be a real test case between antitrust's roots (favoring competition even at the expense of economic efficiency) and the prevailing welfarist view of antitrust that would find it hard to condemn a voluntary deal that increases efficiency (and of course can't hurt B), even if it does so by limiting competition.[13] As the Supreme Court stated in *NCAA*, "the rule of reason does not support a defense based on the assumption that competition itself is unreasonable."

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[11] Joseph Farrell & Carl Shapiro, "Asset Ownership and Market Structure in Oligopoly," 21 RAND Journal of Economics (1990), 275-292. Treating entry as the integral of small reductions in marginal cost from an arbitrarily high level e* (at which E would not be active even if it entered) down to e, one can infer sufficient (but not necessary) conditions for entry to hurt B and S jointly. This may be the easiest way to see that the inequality in the text always holds for relevant values of $e \geq c$: Farrell and Shapiro show that, for linear demand and constant marginal costs, a small reduction in E's marginal cost imposes a negative externality on B and S jointly if E's market share is less than S's, which of course it is everywhere on the path from a prohibitively high value of e to one finitely above (or equal to) c. But this is not always an illuminating approach, because the sufficient conditions identified may be too stringent. For instance, if demand displays constant elasticity $a > 0$, the argument proves that entry hurts S and B jointly if E's market share will not exceed $s - (a+1)s^2/a$, where s is S's post-entry share. Since E's share is $(1 - s)$, this sufficient condition becomes $1 - 2s + (a+1)s^2/a \leq 0$, which cannot hold, even while Mankiw and Whinston (1986) show with other methods that such entry is likely to hurt S and B jointly. There is no contradiction; merely confirmation that sufficient conditions for X may fail even when X often holds.

[12] This does matter, if we step outside the model. For instance, suppose that B is not an end user but a retailer. Improvements in the efficiency with which S and B transact will tend to benefit downstream end users; this kind of efficiency seems much less apt to do so.

[13] Indeed, some may now so fully conflate the words "competition" and "efficiency" that this sentence might make no sense to them.

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2.   Entry is efficient: $J = \Delta W - \Pi < 0 < \Delta W < \Pi$.   Entry is profitable and efficient (raises three-way total surplus) but harms B and S jointly; again they have a bilateral motive to negotiate exclusivity, but now doing so lowers total economic surplus. One might thus call exclusivity anticompetitive here, but here too if the facts were clear I suspect antitrust would find it an uncomfortable case, because the buyer is happy: the adverse effect is solely on the disappointed entrant (see subsection C below).

Such models could illuminate the effects of exclusive dealing if we could assess the relative likelihood of these two possibilities, either in general or in a case or class of cases. But I don't see very much prospect of this. For one thing, exclusive dealing can arise in many other ways. More fundamentally, diagnosing case (1) versus case (2) amounts to evaluating the efficiency of entry from the outside: antitrust (wisely) prefers structural guides that let us presume something about such issues.[14] In particular, antitrust normally presumes that competition is desirable and entry is praiseworthy, while these models apply to the case where it harms others and may be inefficient overall.

C.   SHOULD A DISAPPOINTED ENTRANT'S PAYOFF COUNT?

Inevitably in such a three-party model, any social inefficiency involved in a bilaterally efficient deal between B and S must show up in E's payoff. For instance, Aghion and Bolton (1987) describe how exclusive dealing between B and S risks harming efficiency through excluding (and harming) E.[15] B and S jointly agree to exclusive dealing, intending that a more efficient E will persuade them (or B) to breach, and thus (ex ante) jointly appropriating some of E's efficiency quasi-rents. Aghion and Bolton stress that efficient entry by E is not intentionally blocked (the net externality on B and S of successful entry is positive in their model) but may be inadvertently blocked if B and S try to extract more quasi-rent than there turns out to be. As others have pointed out, that effect does not survive three-way renegotiation once E's costs are observable; then, entry is of course efficient ex post. However, even ex-post efficient appropriation of efficiency quasi-rents may well be inefficient ex ante. Note that while this can harm efficiency, it (like other models in this section) can't harm a well-informed B ex ante, by assumption.

In practice antitrust often discounts complaints by disappointed rivals such as E, especially where they concern E's payoff as such (as distinct from being proxies for E's prowess at making buyers better offers). This is in part for fear that if we didn't ignore such complaints, they would emerge whenever B and S improve the efficiency of their relationship. Beyond that pragmatic view, many feel that buyer welfare should count more, perhaps far more, than seller welfare in antitrust, which might tempt one to ignore E's loss of entry profits. But if one ignores harm to E, the assumption of efficient

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[14] Investment-incentives efficiency justifications for exclusive dealing turn on the possibility that investments by B and S can improve E's ability to serve B (Segal and Whinston 2000b). That changes the terms of trade between B and S, but it also can expand the joint B-S pie if E actually enters. When entry confers a positive net externality on B and S, that effect should encourage them to allow spillovers. While this could fit in the Segal and Whinston (2000b) framework, they do not explicitly make the point, perhaps because their model assumes that E does not actually enter.

[15] Aghion, Philippe & Bolton, Patrick, 1987, "Contracts as a Barrier to Entry," 77 American Economic Review, 388-401, June.

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bilateral negotiation between B and S then simply assumes the answer. A three-party model in which one party's payoff doesn't count and the other two efficiently negotiate is not very helpful. So we should examine more carefully whether buyers can be harmed.

III. THE CHICAGO VERTICAL QUESTION: CAN BUYERS BE HARMED?

As noted above, the C3PA can't ask whether the buyer is hurt (or it gives a facile negative answer); nor can the modified three-party model above or the Aghion-Bolton model. If B can just say no to exclusive dealing and get the same result as if the issue had never come up, then only error on B's part would allow him to be harmed by exclusive dealing or protected by its illegality.

This inspires or reflects the **Chicago Vertical Question (CVQ)**: "if vertical practice P were harmful to a buyer, why would he agree to it?" The CVQ is not restricted to exclusive dealing: it covers all vertical practices, and I find it a very helpful organizing *question*. But as an *argument* ("if it harmed the buyer he wouldn't agree to it"), the CVQ is wrong. We don't really know whether satisfactory answers are empirically common or rare, but logically there are plenty of possibilities. Bernheim and Whinston (2000) give a high-level systematic treatment; I briefly describe some possibilities here in the spirit of deconstructing the Question.

A. ALTERNATIVES AND BENCHMARKS

Often the buyer's *alternative is not the benchmark*: B can't just say no to an exclusive-dealing offer and pay the ordinary market price instead. Indeed, it's not unusual for S to refuse to deal with B other than exclusively (as in *Dentsply*, except for grandfathered dealers). A standard efficiency explanation of exclusive dealing would seem to face a challenge in explaining this (why doesn't S simply set a higher price for non-exclusive trade, reflecting the efficiency difference?). It's logically possible, but surely rare, that relationship-specific investment is so important and so gravely marred by non-exclusivity that there are no gains from trade without exclusivity.

One possible explanation could rely on a negative net externality of entry on B and S jointly. B would gain from trade with E, but S would lose more, so it is (as above) an equilibrium for B and S to agree that B won't trade with E. As described above, this agreement could be either efficient or inefficient overall (including E's payoff). But this kind of explanation seems ill suited to explain why B often complains about exclusive dealing and asserts that it is imposed by S, to B's detriment.[16]

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[16] Such complaints raise questions of how one can talk about who "imposes" or even "wants" a provision of a contract that is negotiated with side payments available: bargaining theory suggests that it will happen if and only if it raises bilateral joint surplus. At this stage the best answer I can give is the alternative/benchmark issue described in the text below. Even if that's wrong, I don't think we should completely ignore what the business people say, puzzling though it may sometimes be.

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To think about this, suppose that S has a monopoly on one product (or a product in a monopoly period or a monopoly state of the world), product 1, and also offers a competitive product, product 2; for simplicity assume that the products are independent in cost and in demand. Start from the case where S sets the monopoly price p^m in product 1 and a competitive price for product 2. Because S's product-1 profits are optimized at p^m, it costs S only a second-order amount to give B a modest reduction in p in return for steering demand or paying a slightly higher price in product 2. Moreover, as long as B's alternative coincides with the benchmark of no linkage, B can't be harmed.   The inducement to buy good 2 from S is offered in the form of a discount on good 1 that makes both S and B better off, that is efficient in market 1, and that may well be efficient overall. In fact this is Ramsey pricing of goods 1 and 2, to extract S's monopoly rent from its position in good 1 more efficiently than is possible with simple pricing of good 1 alone. If S is a good enough bargainer, it may get most or even all of the bilateral gains (gains relative to no exclusive deal, that is), but it can't make B worse off—yet.

But two related forces stop this from being the end of the story. First, if S can commit to refusing to deal with B in product 1 if B doesn't pay S's supracompetitive price for product 2, S can extract an amount equal to B's buyer surplus in product 1: B loses his buyer surplus. While there might be other ways for S to extract what would otherwise be B's buyer surplus (such as a two-part tariff in product 1), buyers of monopoly products typically do end up with some buyer surplus, and it wouldn't be astounding if S can extract additional surplus through this linkage.[17] Such a practice might be called exclusive dealing, though Mathewson and Winter (1997) call it "tying."[18]

Second, less dramatically, S can offer a discount on the price of 1 if B buys product 2 from S. Even with full commitment on the prices, if he expects B to buy the bundle, S now has an incentive to set the stand-alone price of good 1 above p^m, because that lowers B's reservation value in offering the bundle. In addition, commitment to specific dollar prices is often unappealing (for instance because costs are unpredictable), so S may prefer to promise a percentage or relative discount off the stand-alone price. A commitment to making the bundled price X percent or Y dollars below the stand-alone price then creates a further incentive to raise the stand-alone price above p^m so as to bring the discounted price closer to p^m.[19]

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[17] One possible explanation would be if demand for product 2 is better correlated with surplus in product 1 than are other proxies available to S.

[18] G. Frank Mathewson and Ralph Winter, "Tying as a Response to Demand Uncertainty," 28 RAND Journal of Economics, 1997, pages 566-583. When the products are "different goods" in the ordinary sense, most people would be apt to call it tying; when they are "the same good" in different periods or in different applications or in different states of the world, or different units of the same good, it might look like exclusive dealing. The analysis seems to be the same.

[19] Severin Borenstein, Settling for Coupons, Journal of Law and Economics, 1996, in the context of antitrust settlements, shows that relative discounts put the burden of settlements almost entirely on the non-discount customers (and scarcely at all on the sellers who had been convicted). Similarly, transaction charges levied on merchants by credit card and payment systems tend mainly to raise prices to cash customers when merchants do not set separate final prices: see Marius Schwartz and Daniel Vincent, Same Price, Cash or Credit, manuscript (2002, revised 2004), and (for a far more optimistic perspective on the

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While these are subtle issues, the point is that one cannot assume that B's alternative to a proposed exclusive deal is as good as the benchmark that he would be offered if exclusive dealing were prohibited. When it isn't, exclusive dealing can hurt a rational buyer—not of course relative to the *alternative* that he rejects, but relative to the *benchmark* that would arise if exclusive dealing were banned.[20] Indeed, one can view a range of post-Chicago analysis as elucidating how the alternative differs from the benchmark, deconstructing the word "agree" in the CVQ.

B.   MANY BUYERS

A standard answer to the CVQ, associated with Rasmusen, Ramseyer and Wiley (1991) and Segal and Whinston (2000), is that attracting (or preserving the possibility of) competition from E can be a public good among multiple buyers.[21] Especially if it could "discriminate" out of equilibrium, S may be able quite cheaply to induce enough buyers to sign "nakedly" exclusionary contracts. Buyers are harmed here, by one another's deals (not by their own, if they are rational): the *alternative* facing each buyer is worse than the *benchmark* because others' deals make entry less likely.

C.   PASS-THROUGH

Buyers often are not end users but are intermediate buyers who then compete with one another downstream. Pass-through can then sap resistance to anticompetitive effects: if S offers to pay B1 to exclude E, B1 may not suffer very much from exclusion that will raise its rivals' (B2's, B3's,…) costs as well as its own costs.[22] Simpson and Wickelgren (2004) find that this resistance-sapping effect facilitates anticompetitive exclusion (in fact they argue that it restores the many-buyer answer to the CVQ that is otherwise challenged by buyers' option to breach exclusive contracts).[23] Deconstructing the CVQ, the buyers who are *harmed* may be different (in fact downstream) from those who *agree* to exclusivity. On the other hand, Fumagalli and Motta (2003) observe that if lower-cost buyers can expand, E may be able to achieve viable scale by serving just one buyer, who

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same effect) Jean-Charles Rochet & Jean Tirole, 2002, "Cooperation Among Competitors: Some Economics Of Payment Card Associations," 33 RAND Journal of Economics, 549-570, Winter.

[20] These effects lower B's "reservation" utility from *refusing* the exclusive deal. But will B actually be harmed, given that in equilibrium he *signs* such a deal? If S profitably imposes exclusivity and it is bilaterally inefficient for B and S jointly, B is harmed; if it is bilaterally efficient for them, he is harmed if his bargaining power is low enough relative to S's. See for instance Ilya Segal, Contracting with Externalities, Quarterly Journal of Economics, 1999, for an analytical structure assuming that S makes take-it-or-leave-it offers to B and stressing how S's deals affect buyers' reservation utility levels.

[21] Eric Rasmusen, J. Mark Ramseyer, and John Wiley, "Naked Exclusion," American Economic Review 1991; Ilya Segal and Michael Whinston, "Naked Exclusion: Comment," American Economic Review 2000.

[22] Sheldon Kimmel, "Effects of Cost Changes on Oligopolists' Profits," *Journal of Industrial Economics* 1992; Joseph Farrell, "Listening to Interested Parties in Antitrust: Competitors, Customers, Complementors, and Relativity," *Antitrust* **18:**2 (Spring 2004), 64-68.

[23] John Simpson and Abraham Wickelgren, "The Use of Exclusive Contracts to Deter Entry," manuscript 2004.

in turn might serve much of the downstream market because of his low costs,[24] and that being the only buyer with access to E's low-priced input is very attractive, making it hard for S to sign up all buyers. These contradictory results emerge from different predictions about what happens if one buyer refuses while others sign exclusives. Simpson and Wickelgren argue that if E enters, its low price forces S's prices (even to locked-in buyers) down, so that the buyer who refused the exclusive lowered not only its own but also its rivals' costs. By contrast, Fumagalli and Motta argue that S can still charge a high price to its locked-in buyers, so that the holdout lowered only its own costs and thus expands and gets a strong competitive reward.

D.   RELATIONSHIP TO THE ONE MONOPOLY RENT THEOREM

The Chicago School's central vertical claim is the "one monopoly rent theorem" (OMRT). In the form suggested by that phrase, this claims that a secure monopolist at one layer of a value chain cannot get a "second monopoly rent" by monopolizing a complementary layer. I prefer the broader formulation that such a secure monopolist tends to internalize complementary efficiencies ("ICE"), seeking to make each complementary layer (and their interfaces) work as efficiently as possible.[25] When competition is more efficient than monopoly in such a complementary layer (presumably the usual case), it follows that the monopolist prefers competition to monopoly at that layer, even if he would be the monopolist there: the "one monopoly rent" version of the principle.

The CVQ is related to the OMRT/ICE: if, as the CVQ hints, vertical practices (departures from some default mode of competition) can't hurt buyers because they would refuse to agree to them, then a seller won't inefficiently depart from the default mode: at a minimum he would have to hold buyers harmless, which suggests that if he finds it profitable it must be efficient.[26]

IV.   **CHOOSING HOW TO COMPETE: COMPARING PLAYING FIELDS**

> "Under which king, Besonian? Speak, or die"—*Henry IV*

The discussion above, like much of the literature, is asymmetric: S can negotiate with B before E can do anything. In some cases, however, comparably placed rivals *compete on exclusives*: buyers may be forced or encouraged to sign an exclusive with one firm or another, but they can choose their fealty. For example, airline frequent flyer programs

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[24] Chiara Fumagalli and Massimo Motta, "Exclusive Dealing when Buyers Compete," manuscript (2003).
[25] For this ICE formulation—and for some exceptions to both formulations—see Joseph Farrell and Philip Weiser, "Modularity, Vertical Integration, and Open Access Policies: Towards a Convergence of Antitrust and Regulation in the Internet Age," 17 *Harvard Journal of Law and Technology* (Fall 2003), 85-135.
[26] Of course there could be adverse effects on others.

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give convex (i.e., increasing marginal) benefits as a function of how much one flies with one airline or alliance, encouraging exclusivity, but rival airlines offer similar programs.

If not all firms offering exclusives have monopoly power, does that imply that exclusives are efficient, or sharply limit the harm they may do? Is competition on exclusives likely to be more or less *efficient* than ordinary competition in the product market, and is it likely to be more or less *fierce*? Good competition policy will seek to combine efficiency with fierce competition; firms' private incentives (especially when they are symmetrically placed) seek to combine efficiency with tame competition. Thus, while we shouldn't (as a populist might) try to enforce the opposite of what competitors want, we also can't completely trust their self-interested choices of how to compete. The motives are partly aligned and partly opposed.

Like questions of competing in systems versus competing in components (and indeed one can view the issue this way), these are hard questions, and I don't set out to resolve them here. Rather, I include this section to remind readers of these questions, relatively little discussed in the literature (at least under the heading of exclusive dealing),[27] and that "everyone does it" isn't a good reason to allow exclusives, any more than it's a good reason to let eighth-graders smoke.

Commentators often start talking, at about this point, about level playing fields. I think sports metaphors are dangerous here.[28] There's nothing wrong with inventing a sport in which players must keep their hands behind their backs; there would be everything wrong with setting analogous rules for the widget industry. Levelness may be a key attribute of playing fields in sports (though not in skiing); it isn't in competition policy. It was a level playing field when psychoanalysts had to get a medical degree; it wasn't a good system.

Illustrating how a level playing field can tilt to monopoly, consider an upstream duopoly selling to a downstream duopoly, which sells to final consumers. If U1 signs an exclusive with D1, consider upstream firms' negotiations with D2. If U1 signs an exclusive with D2, it has monopolized the industry; if U2 does so, or if D2 signs no exclusive, duopoly persists in some form. Thus, once the U1-D1 pact is signed, the anticompetitive gains from monopolization push towards the outcome that D2 will also sign with U1. This fact (if anticipated) presumably sets up fierce competition to sign the first deal. But unless that competition takes the form of low marginal prices (which would undermine the joint gains), consumers don't see full benefits from that form of competition, even if it can (in good circumstances) select the more efficient monopolist.

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[27] Y. Joseph Lin, "The Dampening-of-Competition Effect of Exclusive Dealing," 39 Journal of Industrial Economics (1990), argues that exclusive dealing lowers cross-elasticities and thus softens competition; Daniel O'Brien and Greg Shaffer, "On the dampening-of-competition effect of exclusive dealing," 42 Journal of Industrial Economics (1993) agree that oligopolists have strategic motives to use exclusive deals with their retailers but find that it can be efficient. David Spector, "Are Exclusive Contracts Anticompetitive?" manuscript 2004, takes a bilateral/multilateral contracting framework and finds that (contrary to what is often thought) E's ability to compete on exclusives often fails to restore competition harmed by S's ability to offer them.

[28] I thank Tim Farrell for encouraging me to address the use of metaphor in competition policy.

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To force the observation into sports talk, we should keep our eyes on the ball: it's not whether the winner is determined by relative skill, but also whether the skill is the one that applies in an efficient structure, as well as whether consumers get the benefit.

Moreover, one has to be careful about goals. Sports and business both involve *false goals*. The true goals of sports are such things as exercise, fun, team spirit, and entertainment, but sports work by setting up the false goal of winning. Many problems arise when participants forget the true goals and focus too much on the false one. Similarly the true goals of an economic system, including the private enterprise system, are such things as efficient and fair resource allocation, innovation, etc. It turns out that, as with sports, the true goals are rather well served by setting up a false goal, in this case profits. But, as with sports, it is easy to focus too much on the false goal. Antitrust, as the rules committee of the private enterprise system, must recognize that not all sets of rules with level playing fields are equally good, lest consumers end up perpetually playing on their adversaries' chosen turf.