

# ASSUMING MORE THAN WE KNOW ABOUT INNOVATION MARKETS: A REVIEW OF MICHAEL CARRIER'S *INNOVATION IN THE 21ST CENTURY*

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Michael Carrier has written a timely and interesting book. There is much to like about the book, in particular its accessible format and content. I do fear that it is a bit overly ambitious, however, hoping both to educate the completely uninitiated as well as to develop a more advanced agenda, and at times it reads like two separate books. I suppose related to this criticism are my more detailed comments, which perhaps distill down to this: The book repeatedly and appropriately canvasses both sides of some pretty heated debates, nicely presenting the most basic arguments, and suggesting if not saying that these are matters about which we are profoundly uncertain. Nevertheless, with what seems to me to be little support (and with only essentially anecdotal empirical support), Carrier then chooses sides.

For example, as I discuss a bit more below, the concept of the innovation market is contentious and unsettled. Carrier presents truncated versions of both sides of this debate and then summarily votes in favor of innovation markets, slyly offering to confine the analysis to pharmaceutical industry mergers, but nevertheless offering a “framework for innovation-market analysis.” Frankly, the framework strikes me as little more than a stylized merger analysis under the Guidelines<sup>1</sup>, with a “Schumpeterian Defense” thrown in for good measure (but extremely limited, and essentially the same as the traditional failing firm defense). I see little here to suggest that the innovation market analysis, even as styled by Carrier, will do much effectively to incorporate dynamic efficiency concerns into antitrust. And there are other examples. I would have preferred to see a

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1. The Horizontal Merger Guidelines are the set of policies published by the Department of Justice and the Federal Trade Commission concerning horizontal acquisitions and mergers. U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, HORIZONTAL MERGER GUIDELINES (rev. ed. 1997), available at <http://www.justice.gov/atr/public/guidelines/hmg.pdf>.

book that went into far greater depth in defending these sorts of choices among uncertain alternatives.

First off, the arc of the introductory Part on antitrust is familiar: A swinging pendulum from under- to over-enforcement (and back again) describes the history of antitrust, and the optimal is somewhere in the middle. But Bill Kovacic has masterfully decimated this argument before<sup>2</sup> (although that hasn't stopped it persisting: to wit Commissioner Rosch's 2007 speech on U.S. and EU antitrust enforcement asking again if the pendulum has swung too far.<sup>3</sup>) As Kovacic says:

It is bad enough that the narrative distorts actual enforcement experience to accentuate the pendulum's movements. Worse, by obscuring the actual path of policy, the pendulum narrative impedes our understanding of how federal antitrust enforcement has developed and of what antitrust agencies must do to improve the quality of competition policy in the future.<sup>4</sup>

Kovacic is surely correct that a more nuanced analysis of U.S. antitrust history identifies far less of a pendulum and rather a consistent evolution.

Carrier's book bolsters the historical narrative with the traditional theoretical one: Crandall and Winston<sup>5</sup> versus Baker<sup>6</sup> (i.e., "antitrust enforcement is costly and harmful" versus "no it's not").<sup>7</sup> (Actually Baker's argument is more complex than that, but that's the basic idea). But, alas, Baker relies primarily on four lax experiments as described on page sixty-seven of Carrier's book to support the contention that less enforcement leads to more cartels. Well, sure—where enforcement is more lax, you get more cartels. But nothing in the examples supports the notion that less enforcement leads to more monopolization, and nothing supports the notion that less enforcement against monopolies is harmful to society (the examples aren't really great at supporting the notion that lax enforcement of more nuanced forms of concerted action than cartels harms consumers, either). But this book is largely about unilateral conduct (and to a lesser extent mergers), not cartels, so it's not at all clear to me that Baker's work

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2. William E. Kovacic, *The Modern Evolution of U.S. Competition Policy Enforcement Norms*, 71 ANTITRUST L.J. 377 (2003).

3. J. Thomas Rosch, Comm'r, Fed. Trade Comm'n, "Has the Pendulum Swung Too Far? Some Reflections on U.S. and EC Jurisprudence" (based on Remarks Presented at the Bates White Fourth Annual Antitrust Conference) (June 25, 2007), available at <http://www.ftc.gov/speeches/rosch/070625pendulum.pdf>.

4. Kovacic, *supra* note 2, at 393.

5. Robert W. Crandall & Clifford Winston, *Does Antitrust Policy Improve Consumer Welfare? Assessing the Evidence*, 17 J. ECON. PERSP. 3 (Autumn 2003).

6. Jonathan B. Baker, *The Case for Antitrust Enforcement*, 17 J. ECON. PERSP. 27 (Autumn 2003).

7. MICHAEL A. CARRIER, *INNOVATION FOR THE 21ST CENTURY: HARNESSING THE POWER OF INTELLECTUAL PROPERTY AND ANTITRUST LAW* 65–68 (2009).

refutes the relevant portions of Crandall & Winston for present purposes. Moreover, it has to be said that the actual evidence on mergers is really mixed, as a recent NERA study in *Antitrust* makes clear.<sup>8</sup>

This all may seem like a quibble about an introductory point, but it's much more than that. I can't help but notice that everyone who adopts the pendulum narrative does so to make the point that today's antitrust enforcement is too lax and should be beefed up—history demands it. This book is no exception. But, of course, starting from the point of view that more antitrust is good for innovation, it is not surprising that Carrier finds this to be true throughout the book. Meanwhile, the *actual* evidence says something pretty close to reduced antitrust may result in more cartel activity—which Adam Smith said, too, and which is a far more limited claim.<sup>9</sup>

The primary focus for Carrier in discussing antitrust and innovation is so-called “innovation markets.”<sup>10</sup> These are, in essence, markets consisting of R&D (as opposed to the traditional antitrust analysis of product markets). And as Carrier notes the “theory behind innovation markets is that a merger between the only two, or two of a few, firms in R&D might increase the incentive to suppress at least one of the research paths.”<sup>11</sup>

That's the theory, anyway. But as Carrier himself points out (although he dismisses this criticism), “we do not know the market structure most conducive to innovation.”<sup>12</sup> We don't know about the relationship between concentration and innovation what we know about the relationship between concentration and price—and we don't even know much about that. The evolution of unilateral effects analysis in modern merger thinking is that market concentration is not a good predictor of effect.<sup>13</sup>

The fundamental flaws in the innovation market concept are precisely these: That we don't know about the relationship between market structure and effect, that error costs are high, and that competition is multidimensional. In other words, we don't know a lot and acting on our ignorance in this arena is costly.

I won't belabor the points here too much, but it's pretty straightforward that a) increased concentration might actually be good for incentiviz-

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8. See Graeme Hunter, et al., *Merger Retrospective Studies: A Review*, 23 ANTITRUST 34 (2008).

9. ADAM SMITH, AN INQUIRY INTO THE NATURE AND CAUSES OF THE WEALTH OF NATIONS 130 (Edwin Cannan, 1904).

10. See, e.g., Richard J. Gilbert & Steven C. Sunshine, *Incorporating Dynamic Efficiency Concerns into Merger Analysis: The Use of Innovation Markets*, 63 ANTITRUST L.J. 569 (1995).

11. CARRIER, *supra* note 7, at 297.

12. *Id.* at 298.

13. Joshua Wright has a forthcoming paper describing this evolution. Joshua D. Wright, *Anti-trust, Multi-Dimensional Competition, and Innovation: Do We Have an Antitrust-Relevant Theory of Competition Now?*, in REGULATING INNOVATION: COMPETITION POLICY AND PATENT LAW UNDER UNCERTAINTY (Geoffrey A. Manne & Joshua D. Wright, eds., forthcoming 2010), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1463732](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1463732).

ing R&D (increasing expected returns to investment), b) innovation is precisely where error costs are highest and you don't have to believe all that Schumpeter wrote to get that, and c) competition is multidimensional, and while concentration might seem to harm consumers on one dimension, it may benefit them on another—and we don't know the magnitude of the tradeoff, or even exactly how to make it.

On the first point, I would refer to Schumpeter,<sup>14</sup> of course, but also to another recent paper: *Rewarding Innovation Efficiently: The Case for Exclusive Rights*, by Vincenzo Denicolò and Luigi Franzoni.<sup>15</sup> The article demonstrates that, especially when innovations are large (in Carrier's term, "drastic"<sup>16</sup>), maximal rights (in the Denicolò and Franzoni article, patent rights, but the concept should carry over into market structure, as well) incentivize optimal innovation, even though product market competition is weakened. The odd thing is that Carrier draws precisely the opposite conclusion—that drastic innovations call for less, not more, concentration of returns. But a significant body of literature suggests that in markets with leaders (monopolists) and endogenous entry (the more realistic assumption that entry is dependent on profitability rather than exogenously determined and independent of profitability), leaders will, if anything, *over* invest in innovation.<sup>17</sup> As one commentator has concluded:

A main point emerging from our analysis of the behavior of market leaders facing or not facing endogenous entry is that standard measures of the concentration of a market have no relation with the market power of the leaders and may lead to misleading welfare comparisons.<sup>18</sup>

Just so, and I wonder why claims that market concentration are clearly bad for welfare, particularly in extremely ill-understood "innovation markets," survive with no empirical support.

On the second, I would just point out that there is almost no discussion of error costs in the book—no discussion of bureaucratic agency issues, judicial process problems, public choice problems, and the like—other than to criticize excessive copyright protection for precisely the same reason one might refrain from excessive antitrust enforcement. Again, particularly when talking about unsettled concepts being enforced by imperfect

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14. JOSEPH A. SCHUMPETER, *CAPITALISM, SOCIALISM AND DEMOCRACY* (1942).

15. Vincenzo Denicolò & Luigi A. Franzoni, *Rewarding Innovation Efficiently: The Case for Exclusive Rights*, in *REGULATING INNOVATION: COMPETITION POLICY AND PATENT LAW UNDER UNCERTAINTY* (Geoffrey A. Manne & Joshua D. Wright, eds., forthcoming 2010) (an earlier version of this paper is available at <http://innovationforum.gmu.edu/2008/papers/reward.pdf>).

16. CARRIER, *supra* note 7, at 301.

17. See, for an excellent example, Federico Etro, *Endogenous Market Structure and Antitrust Policy*, 57 *INT'L REV. ECON.* 9 (2010).

18. *Id.* (manuscript at 8, available at <http://www.intertic.org/Policy%20Papers/JLaw&Econ.pdf>).

agencies, I would like to see some more restraint. To be fair, Carrier does try in several places to cabin the extent of his proposals (as I mentioned, (almost) confining the innovation market analysis to the pharmaceutical industry, for example),<sup>19</sup> but I would have expected to see some justification for this cabining in clearer expressions of the kinds of institutional dysfunction that can systematically tar the antitrust enterprise.

Finally, on the third point (but more generally related to all three), referring to the critiques of the innovation market theory, Carrier writes:

There is an element of truth to each of these critiques. In many cases we do not know all the potential innovators or the optimal relationship between R&D and innovation. For that reason, an expansive notion of the innovation-market concept is not appropriate.<sup>20</sup>

How about the concept is not appropriate, full stop? We're talking about markets where we understand very little about what makes them tick. Why are we intervening at all? Why are we not, at most, attempting to incorporate a more dynamic analysis into our traditional assessment of product market structure and behavior? Given the complex and poorly understood relationships between investment in R&D, market structure, price, quality, speed of innovation, and welfare effects, shouldn't even the cabined notion of the innovation-market concept be viewed with extreme distrust? Having set up the general framework, but then being forced to limit it to pharmaceutical mergers, I would like to see a firmer expression of uncertainty.

Let me finish with a comment on the applicability of the analysis even to the pharmaceutical industry: It's not so clear cut, even there. I'll take just one example: Drastic versus nondrastic innovation. Carrier claims that we do, in fact, know the optimal market structure for pharmaceutical innovation in part because, for drastic innovations (the sort common to pharma), "competition is superior to monopoly."<sup>21</sup> I struggle to find the support for this contention in theory, but I know it is not true in practice that the pharmaceutical industry trucks only in drastic innovation. Of course, to some obvious extent the claim is accurate: Many of the most important innovations in the pharmaceutical industry are drastic. But, in fact, although commonly dismissed by critics as a form of gaming the regulatory system, it is also true that pharmaceutical companies are constantly tweaking their products, changing chemical compositions slightly, changing pill coatings, changing dosages, etc. These nondrastic changes, while certainly less grand than the big breakthroughs, may be no less important.

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19. See CARRIER, *supra* note 7, at 299.

20. *Id.*

21. *Id.* at 301.

The human body is a complex system, and I imagine Carrier and many other pharmaceutical industry critics are not physiologists. I think the claim that these small adjustments amount to gaming the system and can be and should be deterred—or disregarded in designing the “optimal market structure” for the industry—is a faulty one, and a reflection more of what we don’t understand about complex, innovative industries than what we do.