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***RIGHT ON TIME:***  
**NOT QUITE RIGHT ON ECONOMICS**

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Oliar and Stern develop an economic framework to understand the timing and nature of a first possession rule to establish property, apply this framework to the acquisition of intellectual property, and consider various policy and legal implications.<sup>1</sup> At the most general level, I think their approach has merit and the applications are reasonable. However, the economic framework is muddled and incorrect. Here I will only comment on their economic framework, where I arguably have a comparative advantage.

Oliar and Stern intuitively see time as a fundamental factor in the matter of first possession and begin their framing of the question with a theoretical timeline:

[A] chronology that begins with the first actions a person may take having any relationship to a resource . . . [proceeding to] actions necessary for a person to derive a benefit from the resource: preparations for its pursuit; pursuit itself; the successful completion of pursuit by bringing the resource within one's control; cultivation and improvement to enable beneficial use; and finally actual use . . .<sup>2</sup>

Such a chronology begs the question: What is the optimal time at which ownership should be established? Their economic answer: when the marginal costs and benefits of waiting are equal. In their words the fundamental trade-off is “early awards [have] the risk that a claimant will fail to proceed successfully . . . [and] late awards [have] the potential for prolonging costly multiparty races and disincentivizing race participation.”<sup>3</sup> In other words, early possession might give property to the wrong person, someone who cannot complete the task of ownership, and late possession either ends up with too much dissipation or no one trying.

Oliar and Stern use an iconic marginal benefit/marginal cost graph in Figure 1 to argue for an optimal time  $t^*$  of possession.<sup>4</sup> Unfortunately, Figure 1 is incongruous with their reasoning. For example, they assume marginal benefits

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<sup>1</sup> See generally Dotan Oliar & James Y. Stern, *Right on Time: First Possession in Property and Intellectual Property*, 99 B.U. L. REV. 395 (2019).

<sup>2</sup> *Id.* at 404.

<sup>3</sup> *Id.* at 417.

<sup>4</sup> *Id.* at 407 fig.1.

are initially greater than marginal costs. Consider three scenarios. First, if people randomly instigated the process of first possession, then the first person to show up is the average person. Waiting one more period just draws another average person, and so the marginal benefit of waiting is always zero—marginal benefits are lower than marginal costs. Second, suppose the worst person showed up early: now the marginal benefit of waiting rises over time because it is more likely a better owner shows up—marginal benefits are again initially lower than marginal costs. Finally, suppose the best person arrives early: now the marginal benefit is initially high and falls over time, as drawn in Figure 1—but this is the case that does not fit the theory of the paper! The problem stems from a misapplication of the economic model: marginal benefits and costs are defined over *quantities* of goods, not time.<sup>5</sup>

If we abandon Figure 1, we can focus on the real issues: i) is an early allocation to the wrong person a problem, and ii) does assigning ownership later change the cost of allocating by first possession? Regarding the first issue, there is a well-known answer: an initial allocation of rights is irrelevant when transaction costs are zero.<sup>6</sup> Thus, if Selden receives a patent before Ford even though Ford is the high valued owner, then Ford is willing and able to purchase the patent from Selden. Early ownership allows for trade and is irrelevant for final allocation . . . unless there are transaction costs. This point is briefly and quietly mentioned in the paper,<sup>7</sup> but it is the critical factor. How hard it is to measure, define, signal, and enforce the instigation of first possession is where all the transaction cost action is.<sup>8</sup> Ironically and fortunately, in the discussion of this model and the applications, the authors do consider these issues.

Secondly, as Barzel,<sup>9</sup> Lueck,<sup>10</sup> Suen,<sup>11</sup> and a host of other economists have shown in various contexts, every allocation based on first possession results in a full dissipation at the margin.<sup>12</sup> It does not matter if the allocation takes six

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<sup>5</sup> Space prohibits me from discussing the marginal cost function, but similar analytical problems arise there.

<sup>6</sup> R.H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1, 15-16 (1960).

<sup>7</sup> E.g., Oliar & Stern, *supra* note 1, at 408.

<sup>8</sup> See generally D.W. Allen, *What Are Transaction Costs?*, 14 RES. L. & ECON. 1 (1991).

<sup>9</sup> See generally YORAM BARZEL, *ECONOMIC ANALYSIS OF PROPERTY RIGHTS* (1997).

<sup>10</sup> See generally Dean Lueck, *The Rule of First Possession and the Design of the Law*, 32 J.L. & ECON. 393 (1995).

<sup>11</sup> See generally Wing Suen, *Rationing and Rent Dissipation in the Presence of Heterogeneous Individuals*, 97 J. POL. ECON. 1384 (1989).

<sup>12</sup> Allocation by first possession can be thought of as a change in the mechanism to instigate ownership. For example, first possession might take place through a race (as with patents or the Oklahoma land rush) or through waiting (as with underpriced concert tickets). Different mechanisms imply different behavior, but in equilibrium there must be a full dissipation at the margin. Oliar and Stern get into trouble by not fully appreciating this. For example, they suggest that costs might be higher when large numbers of competitors end up being unsuccessful. Oliar & Stern, *supra* note 1, at 408-09. However, amounts expended

minutes or ten years.<sup>13</sup> Thus, the argument that the costs of first possession increase over time or that they are a function of the specific mechanism is false.<sup>14</sup>

A much better economic approach, and one that is more consistent with the applications and general discussion of the law found in the paper, is that *but for* transaction costs, an early allocation of ownership is always better than a later one. Early possession allows exchange and production to take place sooner, and in a world of positive interest, this is a benefit. However, transaction costs are varied and ubiquitous. Thus the optimal stage at which ownership will be recognized depends on the costs of establishing and maintaining such rights. Sometimes rights will be assigned through a rule of capture, other times through first-in-pursuit, and still other times goods will remain in the public domain.

I can do no better in demonstrating this than Oliar and Stern's discussion of Ellickson's work on whaling.<sup>15</sup> Depending on the problems of identifying the whaler in pursuit and preventing a theft of the whale (which hinge on the type of whale, as well as the methods and technology of whaling), different rules of first possession were used.

At the end of the day, I think Oliar and Stern's intuition and feel for the critical transaction costs of establishing and maintaining property rights to ideas and expressions is basically sound. Unfortunately, they have forced a transaction cost argument into a neoclassical economic framework. It just does not fit.

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depend on the expected probability of success. In equilibrium, there must be a full (and only) dissipation in *expected* terms at the margin.

<sup>13</sup> Lueck pointed out that in the limit of two contenders who have different costs of racing, there is partial, not complete, dissipation. Lueck, *supra* note 10, at 399-400. Whether or not there is total dissipation or not depends on the distribution of racing costs across the population. *Id.* at 400-02.

<sup>14</sup> See BARZEL, *supra* note 9, at 16-18 (discussing rationing by waiting) for an example of how a change in the logistics of waiting leads to changes in the nature of the queue, but not a change in the dissipation at the margin. Oliar and Stern misunderstand Lueck's suggestion that earlier assignment lowers costs. In his discussion, the lower cost results from a change in heterogeneity that is asserted to be correlated with time.

<sup>15</sup> Oliar & Stern, *supra* note 1, at 405-06 (discussing Robert C. Ellickson, *A Hypothesis of Wealth-Maximizing Norms: Evidence from the Whaling Industry*, 5 J.L. ECON. & ORG. 83 (1989)).