is bad – that it involves intolerable harm to children – may in fact count against prohibiting a market in child pornography.

To be sure, Brennan and Jaworski explicitly set aside the question of whether some things that shouldn't be possessed might still be permissibly bought and sold. They write, 'even if there are goods and services that ought not be possessed in the first place, it's an open, empirical question whether commodifying those goods and services might improve upon the status quo … Examining just when this is so goes beyond the scope of our book' (18). If this expresses willingness to reject the Principle of Wrongful Possession, then I am encouraged by it.

3. CONCLUSION

Markets Without Limits offers a sustained and empirically informed defence of a novel – perhaps radical – position in the debate over commodification. While I suspect few will be persuaded of its central thesis, the number and variety of arguments on offer is impressive. The debate over commodification will continue, but Brennan and Jaworski have moved it forward.

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Who Gets What—and Why: The New Economics of Matchmaking and Market Design, Alvin E. Roth. Houghton Mifflin Harcourt, 2015, 262 pages.

In many cases, markets work like this: There is something you want – a television, a sandwich, a pair of jeans – and a price tag. If you have the

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money to pay for what you want, you go to the shop and give the shop owner your money and they give you the item you wanted. Prices do all the work, and they are mostly impersonal.

At other times, however, not only do you have to choose the person who will supply you with what you happen to want, that other person has to also choose you. This is so with, for example, cases of hiring assistant professors, clerks in the court system, interns, and other employees, as well as marriage. In these cases, choosing happens on both sides, as it were – you have to choose a potential employer or marriage partner, and they have to choose you. You can't just show up at Durham University and inform them that you will now be teaching their philosophy of economics class. You have to choose them, and then they have to choose you, from a range of possible candidates each of whom are also vying to teach that class. These aren't impersonal commodity markets where prices do most of the work, they are personal, sometimes deeply personal, markets where money and prices do very little of the work.

In *Who Gets What – and Why*, Alvin E. Roth, co-winner of the 2012 Nobel Prize in Economics for the theory of stable allocations and the practice of market design, wants to tell us how these special kinds of markets work and, importantly, how and why they sometimes don't. These special kinds of markets are matching markets. They are so called because instead of one person demanding and another supplying, both the person demanding and the one supplying have to be matched up, choosing each other.

Seeing all the very different and interesting ways in which these markets fail, as they sometimes do, leads Roth to make his case for the economist-as-engineer, for the need to get engaged in thorough and thoughtful 'market design'. The failures, in his mind, are not failures at the level of markets as such – they are not intrinsic to matching markets – they are, instead, failures at the level of the specific and particular structure, or 'architecture', of the market. The problem is not that we have a market to determine which particular television station gets to cover which college football bowl, the problem is how to design the matching market in such a way that benefits are maximized, while avoiding or decreasing the costs.

The book is a significant success on its own terms. It is targeted at an intelligent lay audience, and hits that target. It is fun to read. Roth's book is full of engaging case studies of successful and unsuccessful matching markets that are as intriguing as they are illustrative. He tells us about the market for televised college football bowl games in the US; the market for space in your home through Airbnb; how medical students get matched up with their residencies; how lawyers-to-be get, or fail to get, important clerkships from fancy judges; how sororities choose their members and how those members choose amongst competing sororities; how kidney exchanges work; and so on. While the book did not tell me enough about the academic history of market design, nor about the debates that animate this particular field in economics, that is not what the book was meant to do. It is not a deep dive into market design. Without being shallow, the book is an invitation to the broader field. It is an invitation you should accept.

In general, Roth tells us, there are certain desirable features of matching markets, which, when they fail to obtain, cause these markets to 'unravel'. What we want is for the market to be 'thick' – we want many participants on both sides of the market. There are problems when markets have too few participants, or are 'thin'. If we have a thick matching market, we may then confront the problem of 'congestion' – when there are too many options, it may take too much time for people to make their choices, or take too much time for the match to be made. We also want markets to be both 'safe' and 'simple' – complicated markets make it difficult for people to choose what they most prefer, and markets that are unsafe can lead to harms that we would rather avoid. As with every market, matching markets should also be 'efficient'. In short, the goal of market design is to help ensure that a market in any given good or service is 'thick, uncongested, safe and simple, and efficient'.

For the most part, problems that plague certain kinds of matching markets are problems for the participants in that market, the buyers and the sellers. Occasionally, however, the problem is not that a willing seller and a willing buyer have trouble finding each other, or finding the best match. Instead, sometimes the problem is that third parties, those not involved in the transaction, find the transaction itself sufficiently repugnant to try and stop people from engaging in that transaction. Horsemeat, for example, is eaten in Europe, Roth tells us, but is prohibited from menus in California because some people thought eating horses to be so morally repugnant that they got together to get it banned in that state.

This last category is of most interest to me. It is what I work on. In the remainder of this review, I'll focus on so-called 'repugnant' markets, and try to say a bit more about them from the perspective of an ethicist.

It would be good to hear Roth's opinion on whether or not he thinks repugnant markets are immoral, or not, or which ones, and why. Roth doesn't offer us his moral take in this book. He doesn't go so far as to tell us that kidney markets are wrongly banned.

But you can read at least some of his views between the lines. Consider that Roth has gone to significant lengths to try to construct a matching market for kidneys that avoids repugnance. Instead of the exchange of cash, the valuable consideration offered is of the same token – a kidney for a kidney. You, who need a kidney, and a significant other, who has a perfectly healthy kidney to donate but whose kidney is not a match for you, find another couple where the one needing a kidney matches with your significant other's kidney and the willing donor's kidney matches your need, and you exchange kidneys. If there is not a match, you can add additional couples in a chain such that we find pairs of matching donor/recipients for each couple. This is the model of the New England Program for Kidney Exchange. It avoids much of the repugnance, and is responsible for saving hundreds, possibly thousands, of lives.

Compare that to horsemeat for a moment. If you thought eating horsemeat were immoral, you wouldn't try to figure out crafty ways to get around the regulation. You wouldn't try to create a market design that got people to feel less repulsed by exchanging horsemeat for some kind of valuable consideration, whatever it was. You wouldn't create a New England Program for Horsemeat Exchange that permitted you to eat horsemeat without paying cash for it but, instead, by raising your own horse and then letting someone else eat it while you eat some other farmer's horse. You would, instead, explain to people why we should not be eating horses.

Roth, in principle, appears not to have a problem with a market in human kidneys. Instead of seeing the 1984 National Organ Transplant Act as an expression of a deep moral truth about the inappropriateness of a market, of whatever description, in human kidneys, he sees it as something to design around. Or, alternatively, he sees it as embodying a mistaken view about the ethics of buying and selling kidneys. After all, the New England Paired Kidney Exchange really is a kind of market.

Repugnant markets may seem repugnant because we think that no one should have the good or service in question. What is repugnant about a market in assassination services, slavery, or, to take the above example, horsemeat, is not some feature of the market, but murder, slavery or the eating of horses itself. The good or activity in question is what is repugnant, and the repugnance we feel at the thought of a market in those things is just a reflection of our prior repugnance at the objects of sale themselves. Remove the market, and it's still repugnant. A gift of assassination, a gift of slaves, or a gift of horsemeat for your birthday is repugnant. These gifts are repugnant, but the repugnance is not explained by, nor otherwise impacted, by the fact that it is a gift. So it's not the market that is repugnant in these cases.

The fact that the New England Program for Kidney Exchange finds few, if any, who express repugnance at the thought of it also suggests that it is not the idea of a market in kidneys that is repugnant. Instead, what appears to be repugnant is some common feature or features of the market, rather than a market itself. In the case of a market in which kidneys could be exchanged for money, we might find one of a number of possible features morally objectionable. In other work (Roth, 2007), Roth highlights three 'principal classes'. The first is 'objectification' or the worry that monetized transactions treat non-objects (like persons or sex) as objects. The second is 'coercion', the worry that people, especially poor people, will feel pressured to sell their kidney in the face of a sufficiently large payoff. Related to coercion is the thought that the coerced poor are exploited. Finally, Roth discusses the 'slippery slope' concern, or the worry that permitting, say, deceased donor sales of kidneys might lead to living donor sales, or permitting the latter will lead to permitting living eye or arm or even heart sales.

Each of the above worries can, in principle, be designed around – as in the paired kidney exchange, which removes money from the market. If so, then we might be left with the conclusion that there are no repugnant markets, just repugnant goods or services, or repugnant, but non-necessary, features of markets. If that is right, then a possible extension of the market design approach that Roth has taken to matching markets could be a market design that categorizes moral objections to markets, and then finds ways of avoiding those features to eliminate the repugnance. Not only would this improve efficiency, it might, just as Roth has done in the case of kidneys, save lives.

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