Chapter 6: The Invisible Hand

Sugden's aim in this chapter is to "identify more precisely the sense in which the market provides opportunity, and to explain how this property of markets can be seen as beneficial, even by people who do not act on integrated preferences."

Interlude: the First Fundamental Theorem of Welfare Economics

One beneficial property of competitive markets is that (given certain idealizing assumptions) they tend toward bringing about Pareto-optimal outcomes.

> *First Fundamental Theorem of Welfare Economics*. Let X be the total allocation of resources in a market economy. If X results from a competitive equilibrium, then X is Pareto-optimal.

An allocation of resources X is *Pareto-optimal* just in case there is no other feasible allocation of resources Y such that (i) everyone weakly prefers Y to X, and (ii) there is someone who strictly prefers Y to X.

> **Invisible Hand Argument**
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> **P1** Competitive markets tend to allocate resources in ways that are Pareto-optimal.
>
> **P2** If an allocation of resources is Pareto-optimal, it is socially desirable.
>
> **C** Competitive markets tend to produce socially desirable allocations of resources.

There are several ways to resist this argument, but it's nevertheless instructive to see how it's meant to work. The first premise --- which is meant to follow from the Theorem --- identifies a property that markets have. It's a *descriptive* claim (albeit one that relies on several idealizing assumptions). The second premise says, of that property identified by the first, that it is a desirable property. It's a *normative* claim (albeit one that, as stated, is likely false --- even granting a preference-satisfaction view of well-being).

Both premises crucially rely on the notion of *preference*: it's taken for granted that market participants have rational, integrated preferences over all the potential bundles of goods that might be allocated to them.

But what if economic agents don't have rational, integrated preferences?

The Strong Market Opportunity Theorem

First, Sugden defines a normative property that, unlike Pareto-optimality, doesn't rely on the notion of preference.

Strong Interactive Opportunity Criterion. For a given exchange economy, an opportunity profile

O satisfies the Strong Interactive Opportunity Criterion if (i) **O** is market-clearing and (ii) for every non-empty set of consumers $S \subseteq I$, for every jointly feasible acquisition profile $\mathbf{q_S}$ for S, either $\mathbf{q_S}$ is allowable in $\mathbf{O_S}$ or there is some consumer *j* in *S* such that q_i is dominated by some element of O_j.

In words: **O** (an opportunity profile) satisfies the criterion if "for every jointly feasible transaction that all consumers could plausibly want to participate in, the trading institution makes each consumer's component of that composite transaction available to him as an option that he can choose *as an individual agent*," and this holds for the entire *n*-person economy as well as in every 'sub-economy' that's populated by a subset of the set of all consumers.

Next, Sugden provides a characterization of a **competitive equilibrium** in a market.

Each consumer's opportunity set	=	The set of of acquisition vectors for which the net total market value of acquisition is zero.

A *competitive equilibrium* is a list of prices such that (when opportunity sets are specified in this way) consumers' choices are jointly feasible.

Competitive Equilibrium in an Exchange Economy. For a given exchange economy, an opportunity profile **O** is a competitive equilibrium if (i) **O** is market-clearing and (ii) there is a price vector **p** such that, for each consumer i, O_i is the set of acquisition vectors for i whose net value in terms of **p** is zero.

The Law of One Price: "for each non-money commodity, all transactions between that commodity and money take place at *the same* rate of exchange." *The Law of Supply and Demand:* "at these prices, all markets clear" [These two laws follow from the fact that the economy is in equilibrium, that there are traders, and that consumers are price-sensitive. (We don't need to assume that consumers are acting on rational, integrated preferences!)]

The central result of this chapter (which is meant to be analogous to the First Fundamental Theorem of Welfare Economics):

Strong Market Opportunity Theorem. For every exchange economy $\langle I, G, \mathbf{e}, \mathbf{f}(.)\rangle$ and for every opportunity profile **O** for that economy, if **O** is a competitive equilibrium, then it satisfies the Strong Interactive Opportunity Criterion.

Concluding point: Whether or not consumers are "rational" according to neoclassical economics, markets (and, in particular, profit-seeking by competing traders) generate opportunities for individuals to get what they want and are willing to pay for when they want and are willing to pay for it.