of community, even a feeling of responsibility towards other people who own the same brand. These brand communities often develop their own sets of rituals and traditions that can involve attendance at meetings and other social events. They can even involve a form of brand missionary behaviour where community members will attempt to recruit new people to purchase the brand and participate in the social life around it.

At the highest levels of sociocultural analysis, consumer choice has been theorized as playing an important role in the ordering of society. Bourdieu (1984) suggests that social status is no longer simply a function of the possession of economic capital but depends on the accumulation of symbolic capital, which reflects a knowledge of taste (cultural patterns of choice and preference) and that is manifested in consumption choices and lifestyles. Going beyond the conscious action of consumer behaviour, Douglas and Isherwood (1979) identify the largely unconscious process by which the consumption of goods maintains stable social structure across cultures. Goods are used to communicate cultural categories, divisions and rankings, and their use may help to counter the inherent instability of social meanings.

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SEE ALSO: consumption function; optimization

CONSUMPTION FUNCTION

The international depression of the early twentieth century undermined the existing theory that extended departures from full employment were prevented by the natural stabilization of macroeconomic forces. In response Keynes (1936) developed a theory of equilibrium at less than full employment and, in so doing, created the consumption function. As envisaged by Keynes, the function relates aggregate consumption for an economy to variables such as income and wealth. To understand the link between the consumption function and the level of employment at equilibrium, note that the dominant theory prior to Keynes stated that the interest rate would fluctuate to ensure that savings equalled the investment required to maintain full employment. By positing that consumption depended on income, Keynes was able to show that, if the level of saving was not sufficient to meet investment at full employment, the level of income would fall, thereby reducing consumption and increasing saving. The result would be equilibrium at less than full employment, in accord with the reality of the long-lasting depression.

The idea of a consumption function soon took root in economic theory. In basic form, consumption was posited to be an increasing function of income. The fraction of additional income consumed, termed the marginal propensity to consume, was estimated to be very close to one. With estimates of the marginal propensity to consume in hand, questions turned to the evolution of the marginal propensity as an economy matures. Some speculated that the marginal propensity to consume would fall towards zero, as economies develop. Research revealed that such was not the case, with mature economies consuming about 75 per cent of income.

Empirical analyses of the consumption function multiplied over succeeding decades until Lucas (1976) observed that the interplay of consumption, income and interest rates does not yield a stable function that could be identified with consumption. In response, research shifted to studies of parameters related to functions tied more closely to consumers' attempts to maximize their utility. These studies are guided by the permanent income hypothesis developed by Friedman (1957). Under the permanent income hypothesis, individuals wish to maintain a constant relation between consumption and income

(as measured by permanent factors such as expected labour income) and so smooth consumption over their lifetime. Some of the smoothing is easily undertaken by saving for retirement. Another component of smoothing is quite difficult to complete as young workers are unable to borrow against future human capital. Such workers are said to be liquidity constrained. To develop an econometric framework in which to test the hypothesis, Hall (1978) linked Friedman's permanent income hypothesis to models of intertemporal choice. Hall found that the permanent income hypothesis implies that consumption is a martingale, so that only current consumption should be useful in predicting future consumption. While the permanent income hypothesis has been challenged many times (e.g. Zeldes (1989) finds that the predictions do not hold for consumers who are liquidity constrained), the hypothesis is widely believed to be a useful description of consumer behaviour.

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SEE ALSO: consumer behaviour

CONTRACTS

A typical market transaction between a buyer and a seller entails the buyer paying the seller an agreed upon sum in exchange for an agreed upon quantity of a good or service. Debreu (1959) has shown that if such markets are complete and competitive, then the resulting equilibrium is *Pareto efficient*. That is, there is no other allocation of resources that makes every person at least as well off, and some better off. Debreu remarked, however, that the complete markets assumption is very restrictive since it requires the existence of a new market whenever goods differ not only in quality, but also by the time and location of delivery. For example, a fish bought at 3 p.m. in the afternoon is a different good than if it were bought at 8 p.m. the same day. Moreover, if there are not a large number of buyers and sellers of fish for every time and location during the day, then in practice markets are very incomplete.

The purchase and subsequent delivery of fish at a given time and location is an example of what Williamson (1985) calls idiosyncratic exchange. The goal of contract theory is to understand how such idiosyncratic exchange may be governed efficiently. For example, suppose that the fish delivery is late, and occurs at 8 p.m., rather than at 3 p.m. as originally agreed upon. Anticipating that this may occur, the contract with the delivery company may require damages to be paid in the event of a late delivery. These damages play two roles. First, they provide incentives for the delivery company to be on time. Second, they provide some insurance to the restaurant against lost income due to late delivery.

Moral hazard

If the delivery company is very small, and traffic conditions make timely delivery difficult and uncertain, then such damages also pose a hardship to it. Thus one faces a trade-off – large damages provide incentives for timely delivery and insure the restaurant, but they also impose a risk upon the delivery company as a result of events that are not under its full control. This is known as the problem of *moral hazard*, and is the basis for the principal–agent model. In this model, the principal (the restaurant) offers the agent (the delivery company) a contract that optimally trades risk off against insurance.

The optimal contract has the feature that insurance should not be perfect whenever the agent can take actions that affect the probability of a loss. The problem of moral hazard is ubiquitous, and can explain why insurance programmes rarely provide complete coverage. Examples include limits on the duration of benefits in unemployment insurance programmes and the use of co-payments in health, fire and automobile insurance. In addition, it has been shown that the