

AN IPSATIVE THEORY OF BUSINESS BEHAVIOUR *

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Orthodox decision theory is often not well able to account for business decisions like entering a business or a profession or choosing the type and location of investment. A revised model of human behaviour provides a new explanation of business behaviour by comparing the objective possibility set with the personal (ipsative) possibility set of decision makers. Empirical evidence suggests that these two sets of alternatives systematically deviate from each other. Institutions such as research departments within firms and outside consulting firms may emerge to overcome the (ipsative) limitations of individual decision making.

1. Theory versus actual business behaviour

According to neoclassical economic decision theory as applied to firms, the people responsible for business decisions are taken to consider a complete set of (relevant) alternatives, to evaluate the benefits and costs of these possibilities, and to choose that alternative which maximizes the firm's profits (Clarkson 1968; McGuigan and Moyer 1975). With uncertainty present, decision makers are taken to maximize expected profit, a rule based on the set of axioms established by Von Neumann and Morgenstern (1944), which are generally considered to

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be both reasonable and necessary conditions for optimal choice (Savage 1954). The positive interpretation of this initially normative theory has been hailed as one of the major achievements in the social sciences in the Post War period (see Schoemaker 1980, 1982; Machina 1987).

Actual decisions in business have, however, often been observed to deviate strongly from the behaviour stipulated by expected profit maximization theory. When managers take decisions with respect to size and timing of investments, the choice of location and product lines or the distribution of profits, these are hardly compatible with the procedure and/or outcomes predicted by economic decision theory (see e.g. Geissler 1986; MacCrimmon and Wehrung 1986; or Schwartz 1987).

Various attempts have been made to overcome this deficiency of orthodox economic theory. Two major approaches can be distinguished:

(a) Instead of assuming that decision makers maximize (expected) firm profits it is taken into account that the managers in charge pursue their own interests, i.e. maximize their *own utility*. That managers, and not firm owners, are in most cases decisive in modern corporations has been stressed by the 'managerial theories of the firm' (e.g. Baumol 1959; Williamson 1964). This approach has further been developed in the context of property rights theory (see Furubotn and Pejovich 1974; Alchian and Demsetz 1972) which focuses on the relationship between principals (the firm owners or shareholders) and agents (managers). It is shown that because of high transaction costs, i.e. costs of information and control, the agents' behaviour is only imperfectly monitored by the principals (in particular Williamson 1970, 1975). Managers use their discretionary power to pursue policies which are beneficial for themselves, in particular they care for their own monetary and non-monetary income in the form of perquisites. Nevertheless, managers are not free to pursue their own utility without restrictions. Their behaviour is the more strongly constrained the more efficient capital markets are. A firm which deviates too much from profit maximization will experience low share prices such that an 'unfriendly' takeover by outsiders becomes possible with the result that the managers are in danger of being dismissed (Jensen and Meckling 1976; Fama 1980). A second restriction to prevent managers deviating from profit maximization are the markets for managers, in which only those actors will be highly priced

who have demonstrated that they can run a firm efficiently (Holmstrom 1983).

(b) Decision makers in firms are not taken to be maximizers but to pursue a '*satisficing*' strategy (Simon 1955, 1957; March and Simon 1958). Closely related to this well-known concept of bounded rationality are Leibenstein's (1976) 'inert areas', i.e. circumstances in which there exist insufficient incentives to take a maximizing action.

Both approaches sketched are able to explain part of the observed decisions in business firms, and to narrow the gap between theory and actual behaviour. This article suggests yet another approach focussing on the alternatives which are *taken into consideration* before an actual choice between them is made. Therefore, the decision process is separated into two phases:

(1) A *first* phase in which the alternatives considered by the decision makers are determined. The resulting '*ipsative set*' (derived from the Latin word 'ipse', i.e. oneself) of alternatives is contrasted to the 'objective set' which includes all alternatives deemed relevant by a not involved outside observer.

(2) A *second* phase in which the choice among the alternatives included in the ipsative set is made.

This paper emphasizes the first phase which has so far been neglected in the literature. It is proposed that the second phase is of minor importance because the ipsative set includes only a few and rather similar alternatives.

This ipsative theory of behaviour is applied to two specific areas of decisions involving business: one is the decision to establish a firm or to engage in a particular profession; the second is the choice of investments. In each case, an effort is made to provide an explanation of the empirically observed phenomena on the basis of orthodox economic decision theory, and it is then shown in what respects ipsative theory based on both economic and psychological elements, is able to explain them. This does, of course, not mean that there is no room for orthodox decision theory. Rather, it is argued that its applicability is more limited than maintained in the literature, as it only applies to the second phase of the decision process.

The theory of business behaviour here developed endeavours to contribute to the emerging field of 'psychological economics' or 'economic psychology' (see e.g. the survey article by Van Raaij 1981; or the books by Maital 1982; MacFadyen and MacFadyen 1986; Lea et al. 1987; and Earl 1988). The orthodox (economic) theory of behaviour along strictly neoclassical lines (Becker 1976; Stigler and Becker 1977) is opened up by introducing psychological elements (for other recent efforts see, in particular, Scitovsky 1976; Van Raaij 1985; Pieters and Van Raaij 1988; Frank 1985a,b; Akerlof and Yellen 1988), and at the same time it is shown how business behaviour depends on specific psychological factors.

Section 2 of this paper summarizes the ipsative model of human behaviour. Section 3 applies it to the entry into a profession or a business sector, and section 4 to the decision process within the firm. The particular limits of individual decision making identified by ipsative theory may be overcome by various measures discussed in section 5. Section 6 offers concluding remarks.

2. An ipsative theory of human behaviour

Empirical observations suggest that individuals do not always take the alternatives available to them as binding: sometimes, alternatives are considered that are objectively impossible, and other alternatives that are objectively possible are disregarded. The possibility set which a particular individual takes to be relevant for himself – the *ipsative possibility set* – differs from the objective possibility set. The difference between these two sets of alternatives does *not* lie in individuals' limited information or intelligence: these factors account for the difference between the *objective* and the *subjective* possibility set (a difference well known in economic theory) which tends to disappear over the course of time. In contrast, the difference between the ipsative and the objective possibility set does not narrow down over time; rather, it is maintained over long periods, and there are circumstances in which the difference even increases (see Frey 1988).

This approach stays within the rational choice framework; the analysis does not rest on any kind of irrationality, or arbitrary and unexplained shifts of preferences. Rather, the economic approach to explaining human behaviour is exploited more fully by contrasting the

two basically different kinds of possibility sets, as well as by the proposition, that the final decision is made among the alternatives within the *ipsative* possibility set.

Two different cases of how the ipsative possibility set deviates from the objective one can be distinguished:

(a) Under specific conditions people taking decisions overestimate what is possible for them: they *overextend their ipsative possibility set* beyond the objective possibility set. A tension or conflict may arise between a position desired but not objectively feasible, and a position feasible but not the most desirable. If such an incompatibility were typical for unintelligent persons only, or the result of an error due to disappear quickly, the incompatibility between the ipsative and the objective possibility sets would not be of much relevance. However, it is argued that such an overextension happens in many situations for perfectly normal, rational individuals, and that there is no tendency for the ipsative possibility set to converge to the objective set. Managers who regularly overload their business agenda may be taken as a common example for this case. Non-adjustment holds because 'reality' can be 'constructed' in many different ways. The possibility set relevant for someone's decisions is not given but rather is the result of an interpretative process of an actor. The interpretation varies according to the 'context' (see Tversky and Kahneman 1973) as well as according to the 'frame' (Tversky and Kahneman 1981), i.e. psychological factors codetermine the relevant problem space (Newell and Simon 1972; Schoemaker 1980).

Overextension is particularly important in the case of uncertainty. In this setting, an individual always finds it possible to associate himself with another domain so that the experiences of others become irrelevant from his personal point of view. This *ipsative probability* may deviate systematically and in the long run from what in the literature is known as objective *and* subjective probability (see de Finetti 1968; Savage 1954): Individuals have a tendency to *underestimate the probability of negative events* and to *overestimate the probability of positive events*. They are subject to a 'judgemental bias: people (have a) predilection to view themselves as personally immune to hazards' (Fischhoff et al. 1981: 29–30), and they 'tend to think they are invulnerable. They expect others to be the victim of misfortune, not themselves' (Kirscht et al. 1966).

Weinstein (1980: 810) presents empirical evidence based on a survey, showing that the overextension of the ipsative set is a common feature in many areas. Most of the listed events refer to diseases where people have a strong tendency to exclude themselves from the base of the population as a whole, and to put themselves in another category. In all cases the underestimation of negative, and the overestimation of positive events means that the ipsative is larger than the objective possibility set: the constraints in term of monetary and non-monetary resources are discounted by individuals when they consider their *own* situation. This has important consequences for their *behaviour*.

(b) Under specific other circumstances individuals' actions are not constrained by the objective conditions but rather by the subset of possibilities which they consider relevant for themselves. In that case the *ipsative possibility set underextends* the objective possibility set. An individual, being objectively able to reach the boundary of the objective possibility set, does not consider part of this set. To an outside observer, it appears that the individual concerned experiences a utility opportunity loss. However, the individual considered does *not* really experience this loss because the larger objective possibility set is beyond his own consideration, and therefore not relevant for him or her.

The underextension of the ipsative set is (as was the case for an overextension) not restricted to unintelligent people but is a common phenomenon among perfectly rational actors. Most people consider only a rather small part of what is objectively possible. To an outside observer, the decisions and the life of such people appear to be rather narrow and moving along a trodden path, and that obvious possibilities for improving the situation are disregarded. Kirzner (1979: 131) calls these failures to notice opportunities ready at hand 'genuine errors'.

The ipsative theory is based on psychological regularities of human behaviour at the *individual* level. This decision level is relevant in the following section 3, where an individual's decision to enter a profession or to establish a firm is explained by *an overextension* of the ipsative set. On the other hand, section 4 deals with decisions inside a firm, where often groups of people take *collective* decisions within a given institutional structure. The analysis there has to go beyond the individual level taking into account collective and institutional aspects. It will be argued that at the aggregate level, business decisions are often

characterized by *an underextension* of the ipsative relative to the objective possibility set.

3. Entry into a profession and a business: Overextending the ipsative set

3.1. Systematic overoptimism

Individuals tend to overestimate the likely success of their undertakings. In the context of business, this cognitive bias applies to (a) entry into professions, and (b) into business, i.e. the foundation of firms.

3.1.1. Entry into a profession

Young people often decide to take up a profession and to gain a good position and income even if it is generally known, and even if they are explicitly told, that the profession is overcrowded and that the career opportunities are bleak. This phenomenon has already been observed by the founding father of economics, Adam Smith. In his *Wealth of Nations* he stresses that 'the overweening conceit which the greater part of men have of their own abilities, is an ancient evil remarked by the philosophers and moralists of all ages. Their absurd presumption in their own good fortune, has been less taken notice of. ... There is no man living who, when in tolerable health and spirits, has not some share of it.' Smith considers this attitude an important reason why law and similar professions are so crowded (Smith 1776: 107).

The same overestimation of one's *personal* success compared to that of other people, or of the average, also applies to other professions such as doctors, teachers or architects. Artistic professions are, however, most likely to succumb to this particular kind of overoptimism. There are few young girls taking up a dancing career who do not expect that they themselves will end up as a primaballerina. They maintain this belief even if explicitly confronted with the cruel facts, in particular that the rate of unemployment is extremely high and the income low. While the young girls dutifully listen to such information, they are unshaken in their overoptimism believing that this may well be true but applies to the others. The same overestimation applies to would-be actors, one of the professions with the highest rate of unemployment in the whole labour force (Schleiniger 1988).

The common feature of the decision to enter such professions which are characterized by rather high cost of training in terms of money, effort and time is that there exists no logically compelling arguments why any particular person should believe that the average experience is relevant for him or herself. The average does indeed not apply to an individual person, and there are always counter-examples of success. *On average*, however, such overoptimism results in a high rate of failures (provided the information given about future conditions in the market is correct).

3.1.2. Entry into business

A closely related case of overestimating one's chances of success applies to individuals who engage in the foundation of a firm. It has often been commented upon, and corresponds to everyday observation, that such people do not heed the advice pointing out that the particular business sector is already overcrowded, and that the chances of success are dismal. Well-known examples of overoptimism are the many restaurants and boutiques opened, many of which close after a quite short period of time.

Empirical evidence suggests that businesses are often established in unprofitable trades '... most entrepreneurs not only fail to, but consciously do not, undertake a precise estimate of profits' (Oxenfeldt 1943: 109–110). Data for Switzerland shows that in the years between 1984 and 1987, newly founded firms (i.e. younger than five years) accounted for 58 percent of all business failures and bankruptcies (Schweizerischer Verband Creditreform 1988). This is in line with findings for the United States (Broom and Langenecker 1979) and Canada (Silversides 1982). Another example relates to the era of free banking (1837–1863), an experiment in U.S. banking history, when 79 out of 104 bankruptcies of newly founded banks occurred in financial institutes younger than three years (Rolnick and Weber 1984).

3.2. Interpretation in terms of orthodox theory

The large failure rates observed with respect to entry into professions and businesses may be explained by traditional economic theory; it is one of the major strength of neoclassical theory that it is flexible enough to account in one way or another for everything. (The question is, of course, how reasonable and useful these accounts are.) Short of

simply suggesting that the individuals deciding are insufficiently informed (which they are not), three explanations for the paradoxical behaviour may be advanced in terms of orthodox economic theory.

(i) Individuals may have a high readiness to accept risk (e.g. Arrow 1971). This may be true but just stating this characteristic of the preference function does not explain anything (in the sense of being amenable to an empirical test) if such speculative behaviour cannot be observed independent of the choice concerned. The argument would be more convincing if it could be shown that individuals who are said to be risk loving with respect to the choice of profession and business, are also risk loving in other aspects of life. This seems not to be the case, as Slovic (1986: 192) states: '... the majority of evidence argues against the existence of risk-taking propensity as a generalized characteristic of individuals.'

(ii) Individuals reject the information provided by other people because they are convinced that they themselves have superior, or 'inside' information not available to other people. However, this cannot explain the high failure rate, provided the 'inside' information is correct.

(iii) Individuals may behave strategically: while they accept the gloomy predictions made, they reckon that if a sufficient number of them decides to enter the profession or business, the government will be forced to intervene and to support them for political reasons. The individuals induce the government to act in a time inconsistent way (see Kydland and Prescott 1977). Viewed *ex post*, the individuals' decision turns out to be rational. Except in 'disequilibrium, this argument again is not compatible with the high failure rate observed (except if the government supports the individuals only *after* they have failed). Normally, governments intervene by increasing the demand for the professions in question, and reduces the competitive pressures on the particular economic sector concerned.

3.3. Interpretation in terms of ipsative theory

Ipsative theory starts from a *psychological regularity*: individuals have a basically different cognition of events as they affect them personally, compared to what is seen to apply to other people, or on average. This applies directly to the choice of profession or business

where the ipsative possibility set is systematically extended beyond the objective possibility set. The latter can be operationalized by what an outside observer – i.e. an individual not personally and directly engaged – would evaluate. Normally, this evaluation would strongly take into account average information applying to a larger number of persons, thus looking beyond the purely personal case.

The ‘psychological regularity’ of overextending the ipsative beyond the objective possibility set is compatible with cognitive dissonance reduction (Festinger 1957). Those engaging in the uncertain and risky choice of entering a profession or establishing a firm serve themselves well to believe in success, otherwise they would not undertake this task. The dissonance between action and ‘objective’ facts is mitigated by adjusting one’s belief in the outcome of one’s actions (see also Akerlof and Dickens (1982) who apply cognitive dissonance to dangerous jobs). Overoptimism is *functional* in the sense of mustering mental resources which otherwise would not be forthcoming (see also Pieters and Van Raaij 1988: 267–268).

4. Decisions in firms: Underextending the ipsative set

4.1. Empirical observations

While normative models of decision making within firms, especially concerning decisions under uncertainty like choosing size and field of investments, have been studied extensively, the process of how actual business decisions are made has received relatively little attention in the literature. As a result, the relation between decision theory and actual behaviour ‘... remains relatively murky’ (March and Shapira 1987: 1404). Some evidence, however, exists.

An interesting recent survey on the relation between theoretical concepts of risk and the risk conceptions held by executives is given by March and Shapira. They conclude ‘that managers take risks and exhibit risk preferences, but the processes that generate those observables are somewhat removed from the classical processes of choosing from among alternative actions in terms of the mean (expected value) and variance (risk) of the probability distributions over possible outcomes’ (1987: 1404). The deviations from classical theoretical conceptions of behaviour under risk can be summarized as follows:

- (a) ‘Managers are quite insensitive to estimates of the probabilities of outcomes’;
- (b) ‘their decisions are particularly affected by the way their attention is focussed on critical performance targets’; and
- (c) ‘they make a sharp distinction between taking risks and gambling’. (March and Shapira 1987: 1404.)

In an extensive, systematic study of the risk propensities of over 500 business executives in Canada and the United States, MacCrimmon and Wehrung (1985, 1986) found similar results. Most of the managers in their study selected investment alternatives focussing on only *one single criterion* (mostly expected return), even though data was provided on a variety of investment attributes. Variation of returns was hardly ever used as a criterion for ranking the different investment alternatives. Another analysis of the managers’ responses suggested that their rankings could also be consistently interpreted as using one investment attribute as a (minimum) constraint and another one as a goal (MacCrimmon and Wehrung 1986: 145). This two-stage cut-off decision making or the sequential elimination of alternatives is similar to the procedure of ‘elimination by aspects’ (see Tversky 1972). Trade-offs between expected returns and variation in returns, as the school of Markowitz (1952, 1959) would propose, were seldom observed. Astonishingly, most of the managers who did trade-off these two attributes preferred *higher* variation in returns to lower.

In another study analyzing the reasons of incorrect business decisions (mainly investment decisions), Geissler (1986) reports even more surprising observations for a sample of 50 German senior executives and owner-managers. When asked for their personal experience with faulty decisions within their firms they stated that 71 percent of these decisions were based on *a single alternative considered*. In an additional 24 percent of the cases the managers considered only two alternatives, without there being any significant reduction of alternatives during the evaluation process. In other words, most of the wrong decisions resulted from a strongly limited set of only one or two generated alternatives. In spite of this, 95 percent of the interviewed managers felt sure that in the moment of decision making they had considered all relevant information. Furthermore, despite easy access to and the availability of (free) information, additional information was not asked for, because for 98 percent of the incorrect decisions the managers

didn't themselves realize any gap between actual and 'objectively needed' information. Geissler also observed no consideration or even quantification of probabilities of possible future events influencing the outcome of the (investment) decisions.

Further similar evidence for business decision making differing significantly from standard economic analysis is also presented by Schwartz (1987).

Taken collectively, this empirical evidence supports the view, one of the (possibly) foremost economists of modern times, John Maynard Keynes (1936) expressed in his *General Theory*: 'If human nature felt no temptation to take a change ..., there might not be much investment as a result of cold calculation' (p. 150). 'Most, probably, of our decisions to do something positive ... can only be taken as a result of animal spirits ..., and not as the outcome of a weighted average of quantitative benefits multiplied by quantitative probabilities' (p. 161-162) (see also Matthews 1984).

4.2. Interpretations in terms of orthodox theory

The empirical observations concerning decisions in business firms may be explained in the context of the traditional economic theory of decision making:

(i) The firms' managers need not consider those many alternatives which obviously have a lower expected rate of return with respect to utility and/or profits. To take such alternatives into account would be irrational because it would raise decision costs. While this argument certainly applies to some alternatives, it does not explain why *so few* alternatives are taken into consideration, particularly as the decisions discussed are of major importance to the firms. According to the neoclassical economic theory of information (Stigler 1966), the more important a decision is, the more carefully should the benefits and costs of alternatives be evaluated.

(ii) Information about more than a few alternatives is costly to acquire. After the deduction of these costs the search for, and evaluation of, such alternatives is not worthwhile and therefore rationally not undertaken (Stigler 1961; Hirshleifer and Riley 1979). This argument may always be advanced to rationalize any decision procedure; it is only useful (in the sense of allowing to derive testable propositions) if

the size of the information cost can be determined independently of the decision studied.

It follows that both arguments based on orthodox decision theory are not convincing and offer only limited insights.

4.3. Interpretation in terms of ipsative theory

The empirical observations about the decisions in firms fit well into ipsative theory which stresses two phases of decision making. It is argued that many alternatives do not enter the managers' considerations, they are outside their ipsative possibility set. To an outsider, it appears that a large share of objectively available options are not taken into account. They are not 'internalized' (in the sociological meaning of the term) in managers' thinking, and even if they are brought up in the discussion, they are not seriously analyzed but rejected out of hand (see also Schwartz 1987: 548).

A particular instance of such an underextension of the ipsative set has recently been called 'status quo bias' (Samuelson and Zeckhauser 1988), a tendency to act according to custom and tradition. An example is provided by brand allegiance: the Schlitz Brewing Company recently launched a series of live beer tasting tests on television. A panel of 100 confirmed Budweiser drinkers (they had previously to sign an affidavit to that effect) were served Budweiser and Schlitz in unmarked containers and were asked which they liked better. Between 45 and 55 percent of confirmed Budweiser drinkers said they preferred Schlitz. Analogous results followed when confirmed Miller drinkers participated in a test. A second example (see also Samuelson and Zeckhauser 1988) relates to a business decision: the firm Lockheed continued to build the L-1011 aircraft at a loss in a vain hope to recover its past investment outlays. The day after announcing its cancellation, the shares of Lockheed rose by 18%, showing that outsiders were less subject to this status quo bias than the managers engaged. Further empirical evidence concerning investments in economically unviable U.S. nuclear power plants has been presented by De Bondt and Makhija (1988). They report an anomalous divergence of the managers' view of the value of an investment project from the (objective) view of the rational stock market (in the sense of Fama (1970)). Even if the same state of information for investors on the stock market and for managers is assumed, the difference in evaluation may

be attributed to the fact that managers do not consider some benefits and/or costs, i.e. again that their ipsative possibility set deviates systematically from the objective one.

4.4. *Collective and institutional aspects*

Decisions in medium and large size firms are usually taken by a group of people (board) in the framework of given institutions relating to accepted rules, procedures and a hierarchical setting. While it may be argued that increasing the number of participants in a decision increases the overall ipsative set (because each manager has his own ipsative set), it would be mistaken to assume that the '*collective ipsative set*' (i.e. the ipsative set pertaining to the group of people deciding), is simply the sum of individuals' ipsative sets. At least two aspects must be taken into account:

(i) Group decision making is subject to the paradox of aggregation, i.e. consistent individual preferences may result in inconsistent aggregate outcomes. This well-known theorem (Arrow 1951; Sen 1970) does not need to be further discussed here.

(ii) The process of aggregations may induce changes in behaviour. An instance is what in psychology is known as 'risky shift' (Stoner 1961), or more generally as group polarization (Cartwright 1973; see also Kaplan and Miller 1983), i.e. the phenomenon that groups are ready to take more risky decisions because responsibility is distributed among a number of people. At the same time it may often be observed that organizations (composed of groups of people) tend to behave *more* conservatively than individuals. What is the explanation?

This question can be answered when the *institutional* setting in which firms' decisions take place is taken into account. Major decisions in a firm of medium and large size, and especially in megacorporations, must be based at least to a certain extent on a *consensus* (see Ouchi 1984; Tung 1984). A major decision can only be successfully put through if all people responsible cooperate. This cooperation cannot be enforced because in the complex issues surrounding important decisions, information and other transaction costs prohibit a close monitoring. A consensus among decision makers sharply reduces the number of alternatives considered: only alternatives which are not too far from what is customary and traditional (i.e. with which the participants

believe to be able to cope personally) are normally acceptable, while unorthodox and daring alternatives are not.

The 'collective ipsative set' relevant for decision making of (all except small) firms is thus the outcome of two ingredients: (a) the ipsative set of each individual manager, (b) the process of consensus where aspects of political economy (see Frey 1983) or public choice (Mueller 1979) come in. It has been argued that the need for consensus reduces the collective set to the intersection of the individual ipsative set.

5. *Overcoming ipsative restrictions*

Individuals can be looked at as beings subject to shortcomings and failures, but who are aware of it and are able to take measures to try to overcome them (see Ainslie 1975; Sen 1974, 1979; Hirschman 1982). These measures may be applied at two levels:

(a) At the *individual* level, rules and procedures may be adopted which help to overcome the weaknesses one is aware of. An example are physicians who tend to mistrust their capability of correctly diagnosing their own state of health (though they are perfectly able to do it for other persons); they therefore prefer to be checked by another doctor in order to be sure that no important finding is overlooked. The best known example in this context is Ulysses who had himself bound to the mast of his ship by his companions in order not to fall prey to the enchantments of the sirens. This subject has been widely discussed in the literature under the name of strategic precommitment (Elster 1977, 1982), ergonomics (Schelling 1978, 1980, 1984), or welfare improving constraints (Maital 1986). While such rules and procedures may be used by some people to help them decide more rationally about their entry into a profession or about establishing a firm, it does not seem to be of general importance in the context of business – at least judging from the examples provided in the literature.

(b) At the *social* level, *institutions* may emerge and may be created to overcome shortcomings in decision making. Managers of firms have in particular used two institutional devices to mitigate the underextension of the (collective) ipsative compared to the objective possibility set:

(i) *Inside* the firm, non-decision making units (research departments) are established with the task of suggesting new alternatives. The effects of such departments are usually rather limited. The decision makers in the firm tend to heed the advice offered only if it suits them anyway, but are not generally prepared to take up ideas and alternatives which were not in their ipsative sets.

(ii) From *Outside*, consulting firms may be hired with the task of analyzing the firm concerned. This appears to be a surprising move from the point of view of orthodox decision theory because most of the firms employing outside consultants have their own research departments charged with the same task. However, such consultants take up the position of an outside observer who is able to go beyond the ipsative view of the firm's managers. To a certain extent, outside consultants are faced with the same difficulties as analysts within a firm, but they are in a somewhat different position as they have been explicitly asked by the management to suggest new alternatives. In order not to be accused of wasting the money paid out for that task, the managers are under pressure to take up at least some of the recommendations of the consultants. Indeed, as Johnston (1963) in a very careful study for Great Britain showed, consulting services can have significant effects on the profitability of firms. He reports an average rate of return on consulting fees of about 200 percent for a sample of about six hundred quantitatively assessable contracts of consulting firms.

6. Concluding remarks

Two areas of business, on the one hand the decision to take up a profession or to establish a firm, on the other hand the firms' decisions with respect to investments and location, have been analyzed with the help of ipsative theory which is based on both economic and psychological elements. The first area is characterized by overoptimism, or the overextension of the ipsative beyond the objective possibility set. The second area is characterized by a consideration of only a few alternatives, or an underextension of the ipsative relative to the objective possibility set. It has been argued that these phenomena cannot be explained in a convincing way by orthodox (economic) decision theory. While these deviations between the ipsative and objective possibility

sets affect behaviour and therefore produce both individual and social losses, the decision makers are to some extent capable of overcoming their own shortcomings, especially by bringing in consultants from outside the firm.

Ipsative theory can be applied to areas outside business. An important area are consumers' decisions which are also subject to strongly restricted ipsative possibility sets. Thus, Samuelson and Zeckhauser (1988) have, for instance, shown that members of Harvard University are extremely reluctant to switch to a different health plan even if such a switch would be clearly advantageous for them. Another area is public policy. Here, the collective ipsative set of the deciding groups (governments, bureaucratic units) is the result of the individual ipsative sets of the actors concerned and the political and administrative process. An example of the resulting restricted collective ipsative set would be the fact that non-budgetary costs, especially opportunity costs, tend to be neglected in the decisions made by politicians and bureaucrats (Tullock 1971; Frey 1983: ch. 6).

Finally, the ipsative approach can also be applied to areas outside the economy such as the choice of marriage partners, or more generally, to 'large' decisions which all seem to be characterized by a systematic neglect of a sizeable part of objectively existing alternatives.

References

- Ainslie, George, 1975. Specious reward: A behavioural theory of impulsiveness and control. *Psychological Bulletin* 82, 463-496.
- Akerlof, George A. and William T. Dickens, 1982. The economic consequences of cognitive dissonance. *American Economic Review* 72, 302-319.
- Akerlof, George A. and Janet L. Yellen, 1988. Fairness and unemployment. *American Economic Review* 78, 44-49.
- Alchian, Armen A. and Harold Demsetz, 1972. Production, information costs and economic organization. *American Economic Review* 62, 777-795.
- Arrow, Kenneth J., 1951. *Social choice and individual values*. New York: Wiley.
- Arrow, Kenneth J., 1971. *Essays in the theory of risk bearing*. Chicago, IL: Markham.
- Baumol, William J., 1959. *Business behavior, value and growth*. New York: Macmillan.
- Becker, Gary S., 1976. *The economic approach to human behavior*. Chicago, IL: Chicago University Press.
- Broom, N.H. and J.G. Langenecker, 1979. *Small business management*, 5th ed.. Columbus, OH: Ohio University Press.
- Cartwright, D., 1973. Determinants of scientific progress: The case of the risky shift. *American Psychologist* 28, 222-231.
- Clarkson, G.P.E. (ed.), 1968. *Managerial economics*. Harmondsworth: Penguin.

- De Bondt, Werner F.M. and Anil K. Makhija, 1988. Throwing good money after bad? *Journal of Economic Behavior and Organization* 10, 173-199.
- Earl, Peter E., 1988. *Psychological economics*. Boston, MA: Kluwer Academic Publishers.
- Elster, Jon, 1977. Ulysses and the Sirens: A theory of imperfect rationality. *Social Science Information* 16, 469-526.
- Elster, Jon, 1982. 'Sour grapes-utilitarianism and the genesis of wants'. In: Amartya K. Sen and Bernard Williams (eds.), *Utilitarianism and beyond*. Cambridge: Cambridge University Press. pp. 219-238.
- Fama, Eugene F., 1970. Efficient capital markets: A review of theory and empirical work. *Journal of Finance* 25, 383-417.
- Fama, Eugene F., 1980. Agency problems and the theory of the firm. *Journal of Political Economy* 88, 288-307.
- Festinger, Leon, 1957. *A theory of cognitive dissonance*. Stanford, CA: Stanford University Press.
- Finetti, Bruno de, 1968. 'Probability: Interpretations'. In: D.E. Sills (ed.), *International encyclopedia of the social sciences* (Vol. 12). New York: Macmillan. pp. 496-504.
- Fischhoff, Baruch, Sarah Lichtenstein, Paul Slovic, Stephen L. Derby and Ralph L. Keeney, 1981. *Acceptable risk*. Cambridge: Cambridge University Press.
- Foppa, Klaus, 1987. Individual resources, objective constraints, and the ipsative theory of behavior. Mimeo. Psychological Institute of the University of Bern.
- Frank, Robert H., 1985a. *Choosing the right pond: Behaviour and the quest for status*. Oxford: Oxford University Press.
- Frank, Robert H., 1985b. Are workers paid their marginal products? *American Economic Review* 74, 549-571.
- Frey, Bruno S., 1983. *Democratic economic policy. A Theoretical Introduction*. Oxford: Blackwell.
- Frey, Bruno S., 1988. Ipsative and objective limits to human behaviour. *Journal of Behavioral Economics* 17, 229-248.
- Frey, Bruno S. and Klaus Foppa, 1986. Human behavior: Possibilities explain action. *Journal of Economic Psychology* 7, 137-160.
- Furubotn, Eirik and Steven Pejovich (eds.), 1974. *The economics of property rights*. Cambridge, MA: Ballinger.
- Geissler, Hartmut, 1986. *Fehlentscheidungen*. Frankfurt a. Main: Lang.
- Hirschman, Albert O., 1982. Shifting involvements. Private interests and public action. Oxford: Martin Robertson.
- Hirshleifer, Jack and John G. Riley, 1979. The analysis of uncertainty and information: An exploratory survey. *Journal of Economic Literature* 17, 1375-1421.
- Holmstrom, Bengt, 1983. 'Managerial incentive problems - A dynamic perspective'. In: *Essays in economics and management in honour of Lars Wahlbeck*. Helsingfors: Svenska Handelshoegskolan. pp. 209-230.
- Jensen, Michael C. and William H. Meckling, 1976. The theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics* 3, 305-360.
- Johnston, John, 1963. The productivity of management consultants. *Journal of the Royal Statistical Society* 126 (series A), 248.
- Kaplan, F.M. and C.E. Miller, 1983. 'Group discussion and judgement'. In: P.B. Paulus (ed.), *Basic group processes*. New York: Springer. pp. 65-94.
- Keynes, Maynard J., 1936. *The general theory of employment, interest and money*. London: Macmillan.
- Kirscht, J.P., D.P. Haefner, S.S. Kagelas and I.M. Rosenstock 1966. A national study of health beliefs. *Journal of Health and Human Behavior* 7, 248-254.
- Kirzner, Israel M., 1979. *Perception, opportunity and profit. Studies in the theory of entrepreneurship*. Chicago IL: University of Chicago Press.

- Kydland, Finn E. and Edward C. Prescott, 1977. Rules rather than discretion. The inconsistency of optimal plans. *Journal of Political Economy* 85, 473-491.
- Lea, Stephen E.G., Roger M. Tarry and Paul Webley, 1987. *The individual in the economy*. Cambridge: Cambridge University Press.
- Leibenstein, Harvey, 1976. *Beyond economic man*. Cambridge, MA: Cambridge University Press.
- Leibenstein, Harvey, 1987. 'X-efficiency theory'. In: John Eatwell, Milgate Murray and Peter Newman (eds.), *The New Palgrave*, Vol. 4 (Q-Z). London: Macmillan.
- MacCrimmon, Kenneth R. and Donald A. Wehrung, 1985. A portfolio of risk measures. *Theory and Decision* 19, 1-29.
- MacCrimmon, Kenneth R. and Donald A. Wehrung, 1986. *Taking risks*. New York: The Free Press.
- MacFadyen, A.J. and H.W. MacFadyen (eds.), 1986. *Economic psychology: Intersections in theory and application*. Amsterdam: North-Holland.
- Machina, Mark J., 1987. Choice under uncertainty: Problems solved and unsolved. *Journal of Economic Perspectives* 1 (1), 277-323.
- Maital, Shlomo, 1982. *Minds, markets and money*. New York: Basic Books.
- Maital, Shlomo, 1986. Prometheus rebound: On welfare-improving constraints. *Eastern Economic Journal* 12, 337-343.
- March, James G. and Zur Shapira, 1987. Managerial perspectives on risk and risk taking. *Management Science* 33, 1404-1418.
- March, James G. and Herbert A. Simon, 1958. *Organizations*. New York: Wiley.
- Markowitz, Harry M., 1952. Portfolio selection. *Journal of Finance* 1, 77-91.
- Markowitz, Harry M., 1959. *Portfolio selection: Efficient diversification of investments*. New York: Wiley.
- Matthews, R.C.O., 1984. *Animal spirits, Keynes lectures in economics*. Proceedings of the British Academy, Vol. LXX.
- McGuigan, James R. and R. Charles Moyer, 1975. *Managerial economics*. Hinsdale, IL: Dryden Press.
- Mueller, D.C., 1979. *Public choice*. Cambridge: Cambridge University Press.
- Newell, A. and Herbert E. Simon, 1972. *Human problem solving*. Englewood Cliffs, NJ: Prentice-Hall.
- Ouchi, William, 1984. *The M-form society: How American teamwork can recapture the competitive edge*. Reading, MA: Addison-Wesley.
- Oxenfeldt, A.R., 1943. *New firms and free enterprise*. Washington, DC: American Council on Public Affairs.
- Pieters, Rik G.M. and W. Fred van Raaij, 1988. Functions and management of affect: Applications to economic behaviour. *Journal of Economic Psychology* 9, 251-282.
- Rolnick, Arthur J. and Warren E. Weber, 1984. The causes of free bank failures: A detailed examination. *Journal of Monetary Economics* 14, 267-291.
- Samuelson, William and Richard Zeckhauser, 1988. Status quo bias in decision making. *Journal of Risk and Uncertainty* 1.
- Savage, Leonard J., 1954. *The foundations of statistics*. New York: Wiley.
- Schelling, Thomas C., 1978. *Economics, or the art of self-management*. *American Economic Review, Papers and Proceedings* 68, 290-294.
- Schelling, Thomas C., 1980. The intimate contest for self-command. *Public Interest* 60 (Summer), 94-118.
- Schelling, Thomas C., 1984. *Choice and consequence*. Cambridge, MA: Harvard University Press.
- Schleinger, Reto, 1988. Personal communication.
- Schoemaker, Paul J., 1980. *Experiments on decisions under risk: The expected utility hypothesis*. Boston, MA: Nijhoff.

- Schoemaker, Paul J., 1982. The expected utility model: Its variants, purposes, evidence and limitations. *Journal of Economic Literature* 20, 529–563.
- Schwartz, Hugh H., 1987. Perception, judgment, and motivation in manufacturing enterprises. *Journal of Economic Behaviour and Organization* 8, 543–565.
- Schweizerischer Verband Creditreform (ed.), 1988. *Mitteilungsblätter*. Mimeo (Summer), Bern.
- Scitovsky, Tibor, 1976. *The joyless economy: An inquiry into human satisfaction and consumer dissatisfaction*. Oxford: Oxford University Press.
- Sen, Amartya K., 1970. *Collective choice and social welfare*. San Francisco, CA: Holden-Day.
- Sen, Amartya K., 1974. 'Choice, orderings and morality'. In: S. Koerner (ed.), *Practical Reason*. Oxford: Oxford University Press. pp. 54–67. (Reprinted in: Amartya K. Sen, 1982. *Choice, welfare and measurement*. Oxford: Blackwell. pp. 74–83.)
- Sen, Amartya K., 1979. 'Rational fools: A critique of the behavioural foundations of economic theory'. In: Frank Hahn and Martin Hollis (eds.), *Philosophy and economic theory*. Oxford: Oxford University Press. pp. 87–109. (Reprinted in: Amartya K. Sen, 1982. *Choice, welfare and measurement*. Oxford: Blackwell. pp. 84–107.)
- Silversides, A., 1982. Report on business. *The Globe and Mail*, June 18.
- Simon, Herbert A., 1955. A behavioral model of rational choice. *Quarterly Journal of Economics* 69, 99–118.
- Simon, Herbert A., 1957. *Models of man*. New York: Wiley.
- Slovic, Paul, 1986. 'Psychological study of human judgement: Implications for investment decision making'. In: H.R. Arkes and K.R. Hammond (eds.), *Judgement and decision making*. Cambridge: Cambridge University Press.
- Smith, Adam, 1776. *The wealth of nations*, book I, chapter X, (edited by E. Cannan). New York: The Modern Library.
- Stigler, George J., 1961. The economics of information. *Journal of Political Economy* 69, 213–225.
- Stigler, George J., 1966. *The theory of price* (3rd edition). London: Macmillan.
- Stigler, George and Gary S. Becker, 1977. De gustibus non est disputandum. *American Economic Review* 67, 76–90.
- Stoner, J.A.F., 1961. A comparison of individual and group decisions involving risk. Unpublished Master's thesis, School of Industrial Management, Massachusetts Institute of Technology.
- Tullock, Gordon, 1971. Public decisions as public goods. *Journal of Political Economy* 79, 913–918.
- Tung, Rosalie L., 1984. *Key to Japan's economic strength: Human power*. Heath, DC: Lexington Books.
- Tversky, Amos, 1972. Elimination by aspects: A theory of choice. *Psychological Review*, 281–299.
- Tversky, Amos and Daniel Kahneman, 1973. Availability: A heuristic for judging frequency and probability. *Cognitive Psychology* 5, 207–232.
- Tversky, Amos and Daniel Kahneman, 1981. The framing of decisions and the psychology of choice. *Science* 211, 453–458.
- Van Raaij, W. Fred, 1981. Economic psychology. *Journal of Economic Psychology* 1, 1–24.
- Van Raaij, W. Fred, 1985. Attribution of causality to economic actions and events. *Kyklos* 38, 3–19.
- Von Neumann, John and Morgenstern, Oskar, 1944. *Theory of games and economic behavior*. Princeton, NJ: Princeton University Press.
- Weinstein, Neil D., 1980. Unrealistic optimism about future life events. *Journal of Personality and Social Psychology* 39, 806–820.
- Williamson, Oliver E., 1964. *The economics of discretionary behavior*. Englewood Cliffs, NJ: Prentice-Hall.
- Williamson, Oliver E., 1970. *Corporate control and business behavior*. Englewood Cliffs, NJ: Prentice Hall.
- Williamson, Oliver E., 1975. *Markets and hierarchies*. Glencoe, IL: Free Press.