CHAPTER 6
AN ECONOMIC FRAMEWORK FOR ANALYZING INDIVIDUAL AND ORGANIZATIONAL CHOICES ABOUT INTRINSIC AND EXTRINSIC REWARDS

Introduction

. . . a worker's job satisfaction depends on the utility or disutility he or she derives from a variety of characteristics of the job.

The basic economic model of consumer choice provides useful insights about individual and organizational choices among both intrinsic and extrinsic rewards. It is important to recognize that intrinsic rewards are not necessarily "free," or even inexpensive. They often involve opportunity costs to either the organization, the individual worker, or both. These costs may be monetary, nonmonetary, or some combination of the two. For example, the organization must incur costs to design jobs that some workers will find intrinsically rewarding and to screen, train, and acculturate workers for those positions.[1] Workers may be able to obtain increased amounts of some intrinsic rewards only by trading off some of their pay or other extrinsic rewards, by incurring higher personal expenses for education or training to qualify for more intrinsically rewarding jobs, or by giving up opportunities for other intrinsic rewards.[2] If they are attempting to behave rationally[3] and have adequate information about the costs and benefits of potential intrinsic rewards, organizations will voluntarily offer the conditions that can lead to such rewards and workers will voluntarily take advantage of them only when each party's expected benefits at least equal its expected opportunity costs.

The Basic Rational-choice Model[4]

Choices Among Job Characteristics

In economic terms, a worker's job satisfaction depends on the utility or disutility he or she derives from a variety of characteristics of the job. These characteristics include both the wage rate and nonwage aspects of the job, like discounts on goods

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[1] Job-design expenses would usually be fixed costs, while expenses for screening, training, and acculturation would be quasi-fixed costs.

[2] As discussed in previous chapters, the nature of intrinsic rewards means that organizations can't provide them directly to workers, although sometimes for brevity we may talk as though they do. Rather, the organization can only design jobs, provide training, and so on in order to provide an opportunity for workers to derive intrinsic rewards from their jobs. In economic terms, intrinsic rewards are part of a worker's total satisfaction or utility.

[3] For the purposes of this analysis, an organization behaves "rationally" if it consistently acts as if it were attempting to optimize some objective function (for example, maximizing profit or productivity, or minimizing costs). A worker behaves rationally if he (she) consistently acts as if he were attempting to maximize individual satisfaction (utility).

[4] Campbell R. McConnell and Stanley L. Brue, *Contemporary Labor Economics*, 3d ed. (New York, NY: McGraw-Hill, 1992), pp. 400-406. McConnell and Brue's discussion of the hedonic theory of wages heavily influenced the basic economic model for this chapter. However, responsibility for specific applications to compensation policy for the uniformed services rests with the 8th QRMC.

and services, health and educational benefits, prospects for wage growth, regularity of earnings, job security, and so on. Other nonwage aspects of the job that might influence the worker's job satisfaction include job safety, geographic location, and other factors related to general working conditions that haven't been classified elsewhere (for example, adequacy of facilities and equipment, attractiveness of the work facility and its surroundings, comfortableness of climate control, and convenience of commuting and parking). We can also think of all the nonwage extrinsic rewards and potential sources of intrinsic rewards discussed in the preceding chapters of this report as influencing the worker's job satisfaction. For example, the style and quality of leadership or supervision, organizational structure, degree of job autonomy, sense of the job's meaningfulness, etc., could all be variables in the worker's utility function.[5]

The differences in characteristics associated with various jobs or job designs suggest that a worker would be willing to make trade-offs among these characteristics in order to increase his or her level of job satisfaction. That is, he or she would choose among alternative possible combinations of extrinsic rewards, intrinsic rewards, and other aspects of a job, exchanging characteristics that yield relatively less satisfaction for those yielding relatively more. For example, he or she might be willing to accept a lower wage rate in return for an increase in the amount of another job characteristic like health benefits, job safety, task autonomy, or quality of leadership that he or she values more highly than the forgone wages. In some cases, the worker may have the opportunity to choose among various potential changes in the characteristics of his or her current job. In other situations, he or she might have the choice among several new jobs, each with a different mix of job characteristics that he or she considers significant.

Indifference Curves

Figure 6-1 illustrates the economic model of an individual's choice among alternative combinations of two aspects of his or her job. On the axes, we could show any combination of the job characteristics discussed above, two at a time. This illustration shows various possible combinations of the wage rate (an extrinsic reward) and task autonomy (a potential source of intrinsic reward). Let the worker initially be at point *a*, receiving a wage rate of $20 per hour and 14 "units" of task autonomy.[6] If the

[5] Note that these job aspects are similar to the context satisfactions in the Job Characteristics Model (Hackman and Oldham 1980, p. 86). McConnell and Brue refer to all nonwage characteristics of a job as nonwage amenities. There are also a number of other ways to categorize various job characteristics or attributes, for example, extrinsic and intrinsic rewards, the Job Characteristics Model's core job-design characteristics (skill variety, task identity, etc.), the Thomas-Jansen categories of intrinsic rewards (sense of choice, competence, meaningfulness, and progress), etc. Although these various classification schemes overlap in many respects, each looks at job characteristics from a different perspective that provides useful insights. (Each one also has certain disadvantages or omits certain types of characteristics.) In addition to the examples already cited, a job's nonwage attributes may also include the Job Characteristics Model's critical psychological states (like experienced meaningfulness or responsibility from the work), outcomes (for example, internal work motivation, growth satisfaction), and context satisfactions (like job security, supervisors, and co-workers; wages are treated separately in this discussion). Graphically, we can only analyze two or three of these job attributes at a time, but the mathematical formulation shown in the appendix accommodates any number of attributes.

[6] The horizontal axis is scaled only for purposes of illustration. The worker does not need to be able to objectively measure either the level of the given job characteristic or his total level of satisfaction. He need only be able to determine introspectively whether he prefers one combination of characteristics (in this case, a wage of $20 and the level of task autonomy we've arbitrarily labeled "14") to another combination. However, for purposes of illustration, we could think of measuring task autonomy using one of the standard job-analysis techniques.

individual places a *positive value* on both money income and task autonomy, then he or she would feel better off with combination *x* than with combination *a*, because *x* represents both a higher wage rate and a higher level of task autonomy.

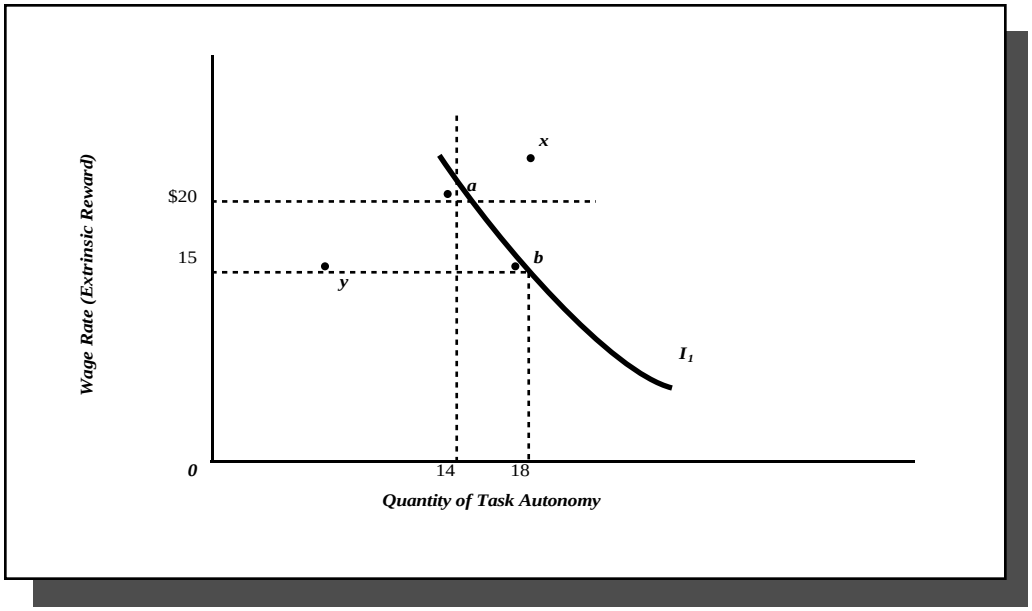

Figure 6-1. An Indifference Curve

In general, the worker clearly would prefer any combination of wage rate and task autonomy that contains more of at least one form of compensation and no decrease in the amount of the other. That is, compared to combination *a*, the worker would prefer any combination on or between the dashed lines forming the quadrant to the northeast of that point. Similarly, the worker would prefer point *a* to any combination in the set formed by the quadrant to the southwest of point *a*, like point *y*, because such a combination contains less of at least one form of reward.

Let point *b* in Figure 6-1 (namely, the combination 18 units of task autonomy and a wage rate of $15) represent a combination that yields the same amount of satisfaction to this worker as combination *a*. That is, the worker literally doesn't care which of these two combinations he or she has. Although point *b* entails a lower wage rate than point *a*, the increase in task autonomy represented by *b* is enough to exactly compensate the worker for the lower wage. The curve labeled I_1 in Figure 6-1 connects all the combinations of wage rates and task autonomy levels that make the worker just as satisfied as he or she is with combinations a and *b*. Because the worker is *indifferent* among all combinations like *a* and *b* along I_1, we call I_1 an indifference curve.[7]

[7] If we asked the worker whether he preferred combination a or combination b, he would respond that he didn't care – he would be equally satisfied at any point along this indifference curve.

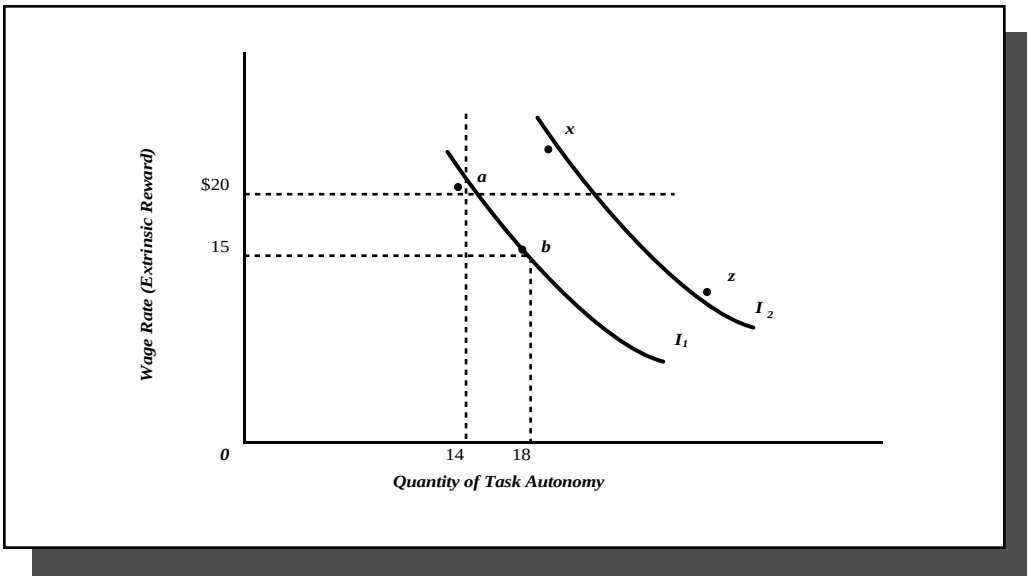

Figure 6-2. Comparing Combinations on Two Indifference Curves

Now consider an indifference curve like I_2, as shown in Figure 6-2. Because combinations *x* and *z* both lie on I_2, the worker would be equally satisfied at either point. Furthermore, as explained above, this worker would clearly prefer combination *x* to combination *a* on I_1, because *x* represents both a higher wage and a higher level of task autonomy than *a*. If the worker's preferences are consistent, we can generalize to conclude that he or she would prefer combination *x* to *any* combination on I_1, because all combinations along I_1 yield the same level of satisfaction as *a*. That is, if the worker prefers *x* to *a*, then consistent preferences mean he or she must prefer *x* to any combination that is equivalent to *a*. Hence, he or she must prefer *x* to any combination on I_1.[8]

But would the worker prefer a combination like *z* to combination *a*, or vice versa? Combination *z* represents a lower wage than *a* but a higher level of task autonomy. Here again, consistency of the worker's preferences implies that, because *x* and *z* are equally satisfactory to him or her (namely, they're on the same indifference curve) and because he or she prefers *x* to *a*, he or she would also prefer *z* to *a*. It follows that, because *any* combination on I_2 is equivalent to *x* in his or her preferences, he or she would prefer any combination on I_2 to *a*. Furthermore, he or she would prefer *any* combination on I_2 to *any* combination on I_1. *In general, the worker would prefer* any *combination on a higher indifference curve to* any *combination on a lower indifference curve.* Appendix A discusses the general properties of indifference curves.

The preceding discussion implies that we can conceptually draw an indifference curve for a worker through *any* combination of the two job characteristics shown on the axes. The set of all possible such indifference curves for these two job characteristics is called the worker's *indifference map*; the indifference map graphically describes the worker's *tastes and preferences* for the job characteristics shown on the axes. Figure 6-3 shows three curves from such an indifference map.

[8] Consistency of preferences means they are transitive.

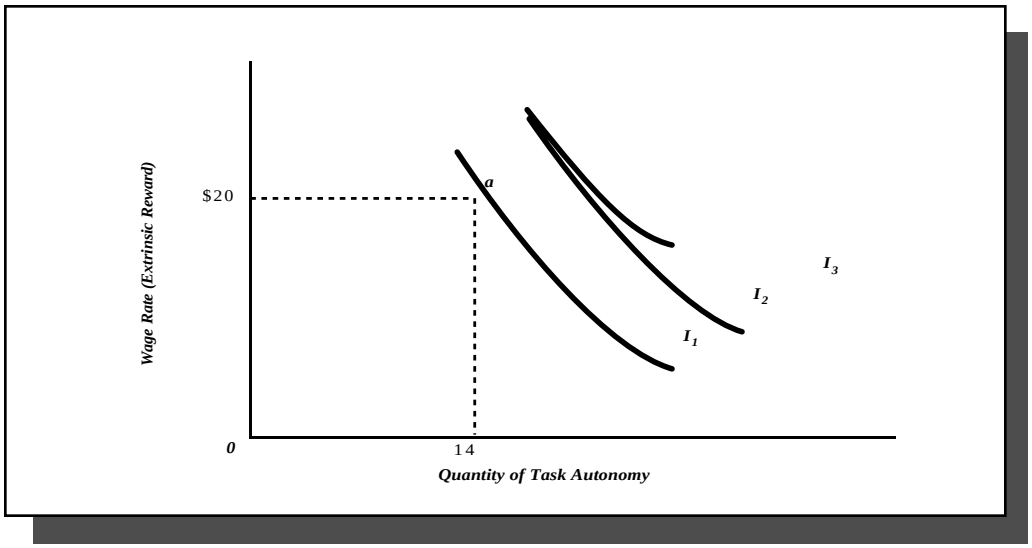

Figure 6-3. An Indifference Map

Diminishing Marginal Utility and the Mix of Rewards

Individual behavior in choosing among available combinations of job characteristics, or of goods and services in general, typically exhibits a fundamental characteristic or "law." *Holding constant the amount of all other goods and services consumed, as a person increases the amount of a certain good or service he or she consumes during a given time period, eventually his or her total satisfaction will increase at a decreasing rate. That is, his or her marginal utility (the rate of increase in total utility) will eventually diminish.* This principle is called the *law of diminishing marginal utility*.[9] Intuitively, it helps explain why a typical, rational worker wouldn't be willing to continue accepting progressively lower wage rates in return for constant increments of a particular type of intrinsically rewarding job characteristic (like task autonomy), or vice versa. Eventually, the additional satisfaction gained from an incremental unit of the task autonomy would diminish relative to its opportunity cost. That opportunity cost is the forgone satisfaction from consuming the other goods and services he or she could have bought if he or she hadn't accepted a lower wage in return for the additional task autonomy.

In general, were it not for the law of diminishing marginal utility, consumers would spend all their income on the single good or service they enjoyed most instead of consuming a variety of goods and services! Similarly, this characteristic of individual behavior has an important compensation policy implication.

[9] It is essential to note that this principle applies only to marginal utility, or increases in total satisfaction. In particular, it does not say that total satisfaction necessarily decreases. For some goods, marginal utility may at first increase. The law of diminishing marginal utility doesn't address this possibility. It asserts only that, under the conditions specified above, marginal utility will eventually decrease. It's possible that the marginal utility of some goods may eventually become negative, so that consuming an additional unit makes the person feel worse off than before, although still better off than not consuming any of the good at all. (Anyone who has ever eaten or drunk "a little too much" of something is familiar with this feeling.) In the extreme, even total utility from some activities may become negative. (Namely, the person may even feel ill after eating or drinking to excess.) However, the law of diminishing marginal utility makes no predictions about these phenomena, either. It says only that, all other things held constant, marginal utility will eventually decrease. The law doesn't address whether marginal utility becomes asymptotic to zero or becomes negative.

Policy Implication

We should expect to find a limit to how much workers would be willing to trade, for example, lower wages for higher levels of other extrinsic rewards (like recognition) or of intrinsically rewarding job characteristics (like task autonomy), and vice versa. That is, we should normally expect workers to seek a *variety* of intrinsic and extrinsic rewards from their jobs.

A Worker's Economic Benefit from a Flexible Reward System[10]

. . . allowing a worker to choose among alternative combinations of various types of rewards permits him or her to increase his or her level of satisfaction . . .

Figure 6-4 demonstrates that, in general, allowing a worker to choose among alternative combinations of various types of rewards permits him or her to increase his or her level of satisfaction, *even holding constant the organization's cost for the various combinations*. For example, let the worker initially be at point *a* on indifference curve I_1, receiving a wage of $20 and 14 units of task autonomy. Further, let the cost of additional units of intrinsic reward be equal to the absolute value of the slope of the straight line connecting combination *a* with point *c* (that is, treat the numerical value of the slope as a positive number). It can easily be shown that reward combinations *a* and *c* both have the *same* total cost to the organization, so the organization would be indifferent between them if its only criterion were cost.[11] On the other hand, the worker would have an incentive to trade reward combination *a* for combination *c*, which represents a higher level of satisfaction. *Note that if he or she can not engage in such a voluntary exchange, perhaps because some of his or her benefits aren't transferable,*

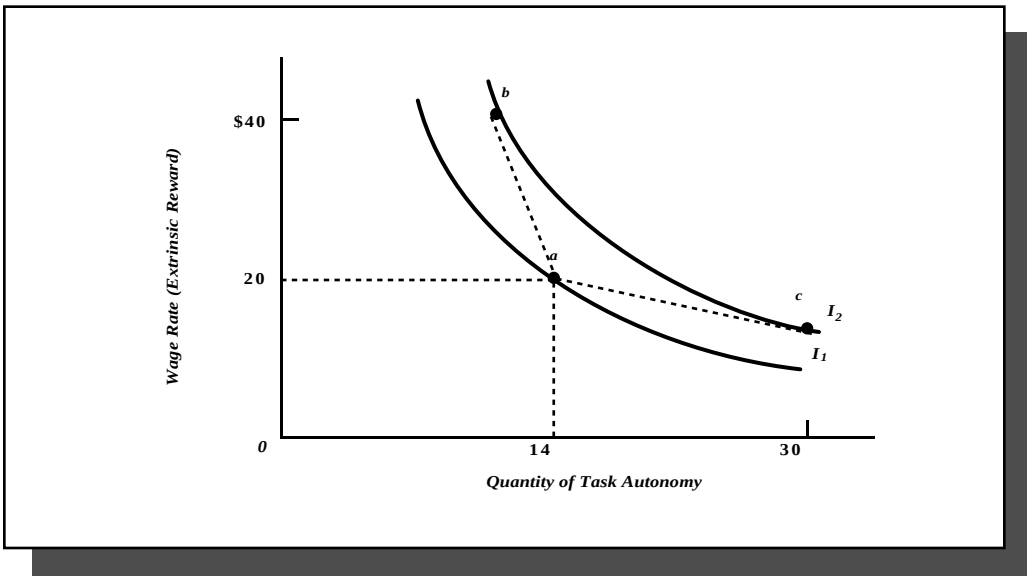

Figure 6-4. Increasing Job Satisfaction Through Trade-Offs

[10] This section is an application of the standard income-in-kind analysis. As this discussion demonstrates, in-kind rewards, whether extrinsic or intrinsic, may reduce the utility of some workers compared to paying them the cash equivalent or allowing them to exchange in-kind rewards in the market.

[11] For a formal proof of this property, see the technical appendix to this chapter.

the worker is confined to the lower satisfaction level, represented by indifference curve I_1. Similar reasoning would apply in comparing combinations *a* and *b*, if the slope of line segment *ab* indicates the cost for each additional unit of the intrinsic reward.[12]

Applications to Current Uniformed Services Human Resource Management Systems

The uniformed services' current human resource management system provides very little opportunity for individual service members to improve their level of satisfaction by making changes in the characteristics of their jobs or the combination of components in their compensation package.

- Work tasks are typically designed to a standard that may be independent of their capacity to provide intrinsic rewards to service members assigned to them, especially if any service member's tastes for performing a task are atypically positive or negative. This virtually ensures that individual service members could reach a higher satisfaction level if they were given more choice in selecting the composition of their compensation package, including its intrinsically rewarding aspects, like job design.
- In addition, while military organizations often engage extensively in a variety of motivational activities to build organizational pride, identity, esprit de corps, sense of membership, etc., individual service members must often participate in these activities regardless of the expected *individual* benefits.[13] The indivisible nature of such activities limits the flexibility of both the individual and the organization to use them as discretionary variables in influencing the individual's total satisfaction from these sources.

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[12] However, note that the slope of *ab* is steeper than *ac*, representing a higher price of task autonomy, as demonstrated in the technical appendix. This means that although combinations *a* and *b* would both cost the same, their cost would be greater than that of combinations *a* and *c* when the price of task autonomy is given by the slope of *ac*, which represents a lower price than *ab* does.

[13] On the other hand, such activities may provide external benefits, namely, they may have a higher value to the unit (group) as a whole than they do to some individual service members. (This is the same as the principle that it is to the advantage of everyone in a group for each member to be inoculated against a contagious disease, regardless of individual preferences, or for every household in a neighborhood to maintain their homes' exterior appearance.) In this case, if service members had the flexibility to choose their individual levels of participation in these activities, individual incentives might lead some of them to choose a level of the participation below the level that would be optimal for the unit as a whole. As a result, from the perspective of the unit as a whole, some degree of compulsory participation would actually increase the level of intrinsic reward from such sources as unit affiliation, esprit de corps, and so on. For example, given the choice, some basic trainees might opt not to participate in what are now compulsory intramural sports activities. But, to the extent that these activities contribute to such intrinsic rewards as unit pride or affiliation for the group as a whole, they make the unit as a whole feel better off than they otherwise would feel. Even those trainees who were reluctant to participate may feel an increased level of intrinsic reward after the fact. Note that some morale-building group activities, like purely voluntary intramural sports, organizational social functions, etc., do provide service members opportunities to make individual choices that are likely to increase their personal levels of satisfaction. (Otherwise, they wouldn't voluntarily participate.) However, the opposite case could also occur under some circumstances: certain activities might have a lower value to the organization than to some individuals, and flexible participation would result in individual over-participation relative to the optimal amount.

Policy Implications

Allowing service members to choose among alternative combinations of various types of rewards would increase their satisfaction level. Potential areas for increasing their scope for choice include:

- Increased flexibility in the components of the uniformed services compensations system;
- More flexibility in choosing among career fields and tracks within career fields; and
- Greater attention to the role of intrinsic rewards, including redesigning jobs to increase their potential for providing such rewards.

As the discussion in the previous section demonstrated, a worker's lack of flexibility in choosing among equally costly combinations of compensation elements may confine him or her to a lower level of satisfaction than he or she could otherwise reach.

Bounded Rationality

The literature on decision-making with incomplete information demonstrates that "when information is costly to gather, and cognitive processing ability is limited, it is not even rational to make fully informed choices of the sort portrayed in simple models [like the one described above]. Paradoxically, it is irrational to be completely well informed!"[14] That is, our ability to act rationally is often limited by the cost, time, and level of knowledge required to gather and analyze information. As a result,

> [W]e rarely reach a solution in a neat, linear fashion. Rather, we search in a haphazard way for potentially relevant facts and information, and usually quit once our understanding reaches a certain threshold. Our conclusions are often inconsistent, even flatly incorrect. But much of the time, we come up with serviceable, if imperfect, solutions.[15]

That is, we often act as "satisficers" rather than maximizers. In cases like these, casual observation of individual behavior when information is incomplete may *seem* to indicate that such behavior violates the predictions of the rational-choice model. Nevertheless, closer examination reveals that the expected cost of searching for and analyzing additional information in these cases exceeds the expected benefits from the search and analysis. Hence, taking those costs into account, satisficing is a rational response to incomplete information.

. . . a worker's lack of flexibility in choosing among equally costly combinations of compensation elements may confine him or her to a lower level of satisfaction than he or she could otherwise reach.

[14] Frank, Robert, *Microeconomics and Behavior*, (New York, NY: McGraw Hill, 1994), p. 283.
[15] Ibid.

Policy Implications

Bounded rationality reinforces the potential advantages to both the organization and its workers for the organization to (1) avoid unnecessary complexity in its compensation system, including the role of intrinsic rewards, and (2) provide workers with adequate, well-designed information and training on the compensation system, while avoiding overwhelming them with details. Depending on the complexity of some of the system's features (for example, 401(k) and other retirement plans), the level of financial sophistication of individual workers will influence the type and extent of information and training required.[16]

The Asymmetric Value Function

. . . Kahneman and Tversky have demonstrated that people often behave in ways that are inconsistent with rational choice . . .

Quite apart from the bounded-rationality problem, cognitive psychologists Kahneman and Tversky have demonstrated that people often behave in ways that are inconsistent with rational choice, even in certain types of transparently simple situations. This class of situations involves how a person evaluates the effect of a collection of two or more events on his or her total satisfaction or wealth.

A Reexamination of the Rational-choice Model

The rational-choice model assumes that a person evaluates events or collections of events in terms of their *net, or overall, effect on total wealth or satisfaction.*[17] For example, consider a situation in which a person simultaneously experiences two events, *A* and *B*. In event *A* the person receives a gift or wins a cash prize of $100. In *B* the person incurs an unplanned, unavoidable cash loss or expense of $80 for something like an unanticipated car repair. The rational-choice model assumes the person would consider the *net value of the combination* of these two events, which increases his or her total wealth by $20. As a result, he or she would feel better off after this combination of events than before it and would behave accordingly.

Figure 6-5 illustrates this outcome for a standard utility function, in which the person's total satisfaction increases with the level of his or her wealth, subject to the law of diminishing marginal utility.[18] Let this person's initial level of wealth be W_0 and his or her corresponding satisfaction level U_0. The combined effect of events *A* and *B* above is to increase this person's total wealth to $W_0 + 20$ and his or her satisfaction level to U_1.

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[16] Citing experimental results found by Tversky that reinforce this point, Frank concludes, "[P]eople simply have difficulty choosing between alternatives that are hard to compare. . . . [I]n practice, it often seems to require a great deal of effort for us to decide how we feel about even very simple alternatives" (300-302, 304). (The "irrelevant alternative" problem is one example.) Greater complexity in alternatives seem likely to make such choices even more difficult.

[17] Ibid., pp. 283-284. This section relies heavily on Frank's discussion.

[18] Based on an example from Frank (ibid.). For purposes of illustration, we assume neither event involves any further benefit, expense, or inconvenience to the person (from, say, taxes, reimbursement from insurance, etc.), so that the person is truly $20 wealthier than before.

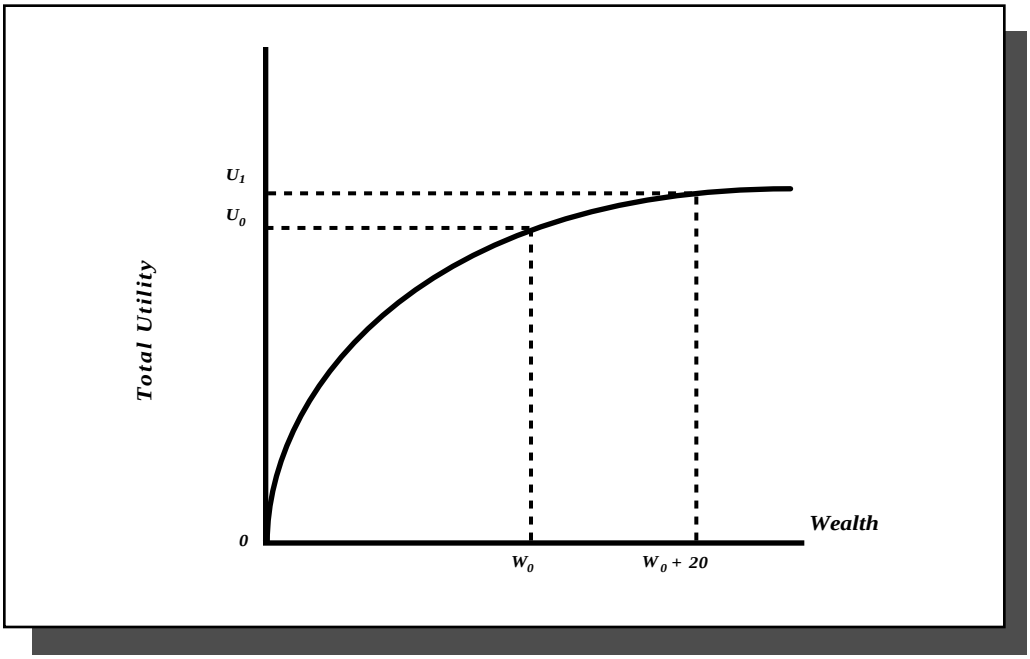

Figure 6-5. A Standard Total Utility Function

The Kahneman-Tversky Asymmetric Value Function

In contrast to the behavior implied by the rational-choice model, Kahneman and Tversky found that, in both controlled experiments and a significant variety of actual situations, some people did *not* behave as though such a combination of events increased their total wealth. In fact, they behaved as though the combination decreased their wealth! To help explain this "irrational" behavior, Kahneman and Tversky propose that some people evaluate alternatives based on a *value function* defined over *perceived changes* in wealth instead of on the alternatives' *net* effect on wealth, as the conventional utility model assumes. Specifically, their model makes three *assumptions* about this type of behavior: [19]

- People first evaluate each separate event individually, then add those separate values together, instead of evaluating just the net wealth effect of the combination of events. That is, their value functions are defined over *changes* in wealth instead of over levels of wealth, as the rational-choice model assumes.

[19] Amos Tversky and Daniel Kahneman (1981), "The Framing of Decisions and the Psychology of Choice," *Science*, Vol. 211, pp. 453-458, cited in Frank, p. 283, fn. 1. Frank emphasizes that this behavioral model has no normative significance. Namely, just because such models predict that people will behave in a certain way, or attempt to explain why they do so, doesn't mean that people should behave in that way. The rational-choice model guides us toward decisions that are "better" according to its criteria, and people tend to agree on the whole with those criteria, at least on reflection. Frank concludes, "In this respect, behavioral models of choice [like the Kahneman-Tversky model] are an important tool for helping us avoid common pitfalls in decision making" (p. 304).

- People weight losses much more heavily in their decisions than they do gains; that is, they treat gains and losses *asymmetrically.*[20] This means their value functions are much steeper in losses than they are in gains.
- Their value functions are concave from below in gains and convex from below in losses. Namely, analogous to the law of diminishing marginal utility, ". . . the impact of incremental gains or losses diminishes as the gains or losses become larger,"[21] at least beyond some point.

People weight losses much more heavily in their decisions than they do gains . . .

Figure 6-6 shows a value function that fits these assumptions. In this example function, the person assigns a significantly larger value to the $80 loss than to the $100 gain, so he or she evaluates the net value of the two events, *V(100) + V(-80)*, as making him or her *worse* off, rather than better off, despite the $20 increase in total wealth. Under the rational-choice model, he or she would instead evaluate the net *gain* in value as *V(20)*.

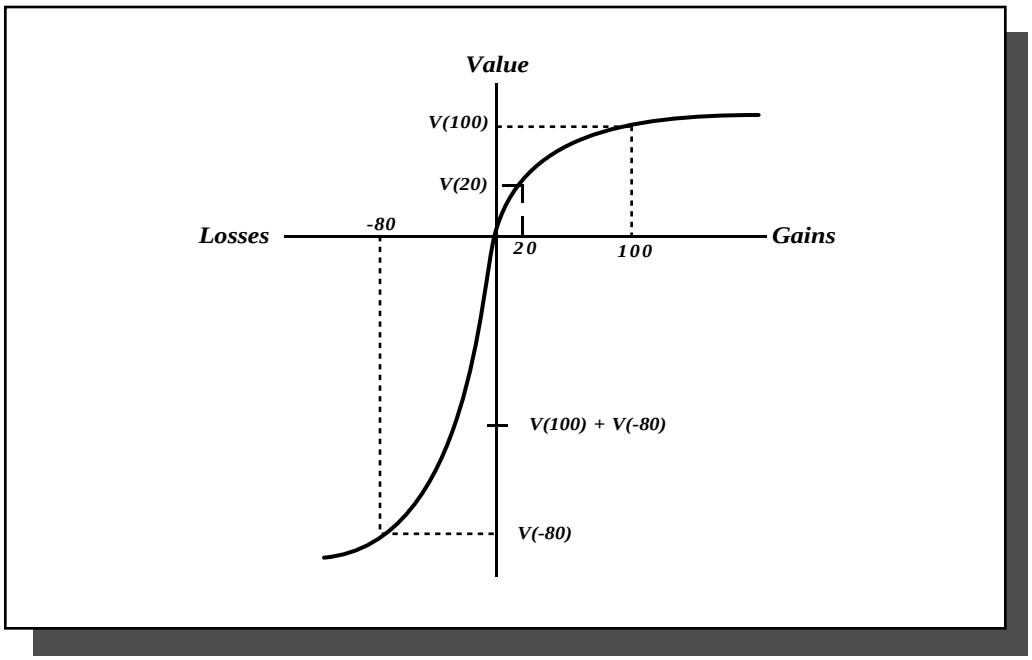

Figure 6-6. A Kahneman-Tversky Value Function

Note that the contrast in these two results essentially depends on how a person chooses to frame the events – that is, whether the person first combines the monetary value of the two events, then evaluates the effect of the *net change in wealth* on his or her level of satisfaction as a single event; or whether he or she first evaluates the

[20] As Frank points out, this assumption doesn't necessarily imply irrational behavior. "There is nothing inconsistent, after all, about feeling that a loss causes more pain than the happiness caused by a gain of the same magnitude. What does often appear irrational is the second step – treating each event separately, rather than considering their combined effect" (ibid., pp. 285-286).

[21] Ibid., p. 284.

separate impact of each event on his or her level of satisfaction, then evaluates the *net change in satisfaction.* Hence, "[S]ubtle differences in the framing of the problem can shift the mental reference point used for reckoning gains and losses, which, in turn, can produce radically different patterns of choice." If someone pointed out to this person that the combined result of events *A* and *B* was clearly a $20 increase in wealth, he or she might well behave as the rational-choice model predicts.[22]

A Case Study[23]

Frank's example of employees' actual choices between two corporate medical insurance plans illustrates the type of behavior predicted by the Kahneman-Tversky value function. The *original plan* had the following features:

- It paid 100 percent of all covered medical expenses.
- The premium was about $500/year per family.

Under the *new plan*:

- There was a $200 deductible; above that level of expenses, the insurance paid 100 percent.[24]
- The premium for the new plan was $250/year per family (half the original plan's premium).

Finally, employees could choose to stay with the original plan or switch to the alternative at no cost, other than those already described.

According to the rational-choice model, the new plan was clearly more beneficial financially:

- The $250 saving in premiums alone would more than compensate an employee for the $200 deductible.
- Beyond that deductible, the new plan paid for all covered expenses.
- Families that incurred less than $200/year in medical expenses would be even better off under the new plan, because they'd have the balance to spend in anyway they chose.

Nevertheless, according to Frank, *many employees preferred to remain on the original plan.* This behavior is consistent with the Kahneman-Tversky model, if their value functions were sufficiently asymmetric (like the one in Figure 6-6) and if they framed the $250 decrease (saving) in their premium separately from the potential $200 out-of-pocket cost for the new deductible if they had any claims.

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[22] Ibid., p. 286.
[23] Ibid., p. 286.
[24] Although Frank doesn't address the point, presumably both plans covered the same types of medical expenses.

Implications for Compensation Strategy

Subsequent research and experiments conducted by economist Richard Thaler suggest four specific strategies that take advantage of the properties of an asymmetric value function to enhance the appeal of gifts, sales packages, and so on, or to reduce the perceived impact of losses.[25] These strategies apply directly to influencing how employees may perceive changes in compensation policy that affect extrinsic rewards, intrinsic rewards, and (or) other job characteristics.

Policy Implications

- **Segregate gains.** As Frank points out, "Because the value function is concave in gains, a higher total value results when we decompose a large gain into two (or more) smaller ones."[26] This is the same principle that leads us to wrap presents in separate boxes, not in a single one.
- **Combine losses or costs.** "The convexity of the value function [for losses] implies that two separate losses will appear less painful if they are combined into a single, larger loss."[27] In other words, "Don't cut off the dog's tail one inch at a time."[28]
- **Offset a small loss with a larger gain, presented as a combined package.** By offsetting a small loss with a larger gain, and *emphasizing the net increase* in total wealth, combining the two events avoids the steepest section of the loss function.
- **Segregate small gains from large losses.** The separate small gain acts as a "silver lining,"[29] leaving the person feeling better off than would be the case if he or she instead evaluated the loss based on the net decrease in his or her wealth.

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[25] Richard Thaler, "Mental Accounting and Consumer Choice," *Marketing Science*, Vol. 4, 1985; cited in Frank, p. 288, fn. 3.

[26] Frank, pp. 288-289.

[27] Ibid., pp. 289-290. This recommendation is also consistent with many common marketing practices. In new-home construction, it is common to include the cost of many construction add-ons or upgrades in the purchase price. Similarly, in new-car sales, factory-installed "options" and dealer add-ons are usually included in the purchase price. In terms of the asymmetric value function model, these practices are consistent with the likelihood that the buyer is already so far out on the (flatter) loss part of the value function that the additional cost of the add-ons adds comparatively little to his sense of the total cost (loss). This consideration reinforces any incentives for these practices that might result from the more-favorable financing terms usually available for the total "package," or from any tax advantage or greater convenience these practices might offer.

[28] Norman R. Augustine, President and CEO, Lockheed Martin Corp., remarks to the Forum on Strategic Human Resources Management in the Department of Defense, February 14, 1996.

[29] Thaler (1985), cited in Frank, p. 291.