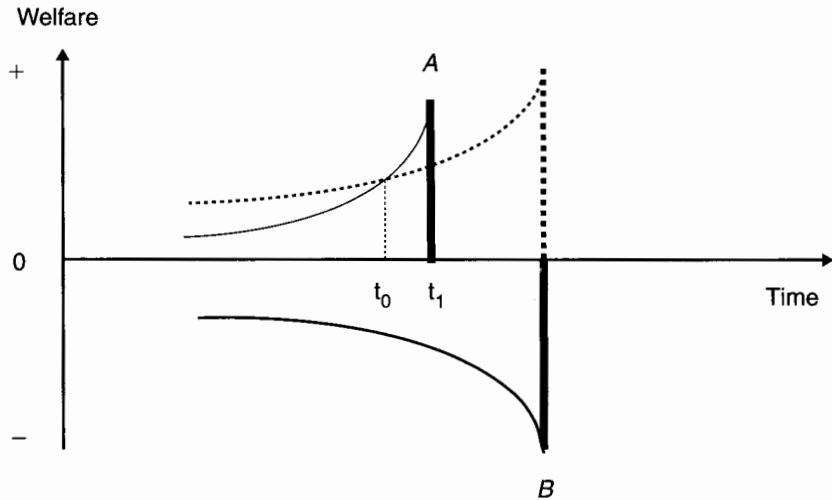


Figure 5.1 Hyperbolic Discounting of a Positive Reward (*A*) and a Delayed Negative Consequence (*B*)



Note: For ease of comparison, a mirror image of the negative consequence is also shown (broken lines).

Figure 5.2 Instantaneous Utility of Present Consumption Choices for Persons with Different Consumption Histories

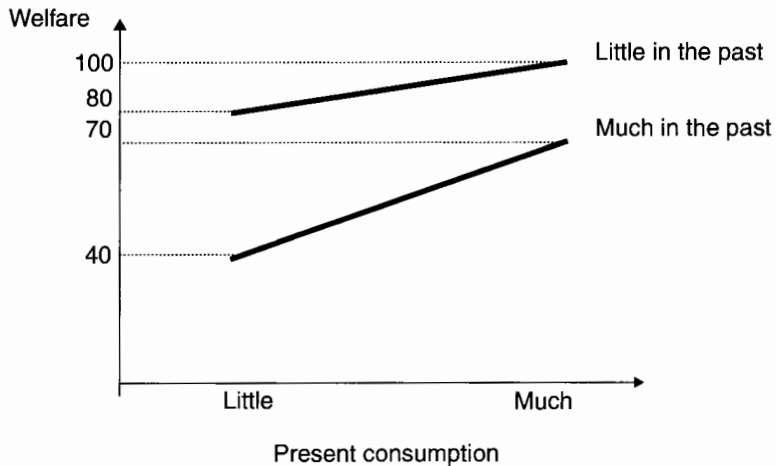
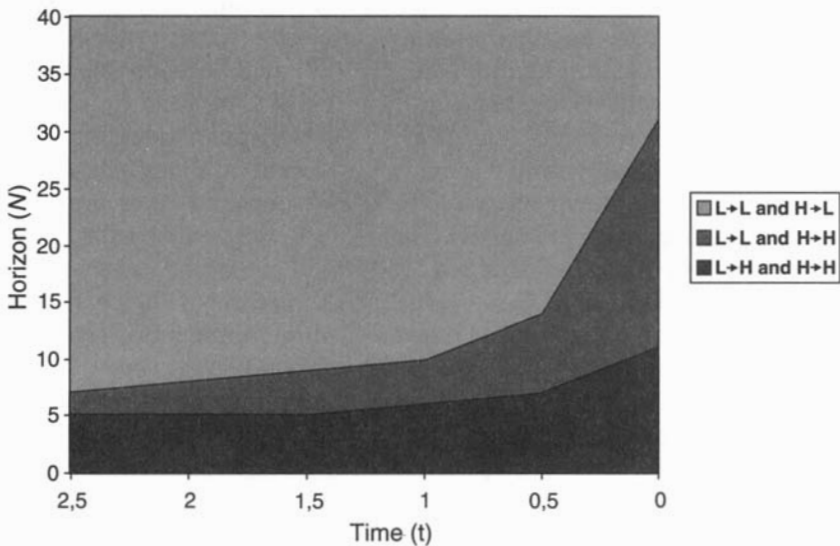


Figure 5.3 Preference Structures for People with Different Horizons (Willpower) at Different Times Before the Time of Choice



Note: $H \rightarrow L$ denotes persons who have had a high consumption in the past and who choose low consumption in the future, and so on.

Figure 5A.1 Repeated Choices Between an Early, Small Reward (A) and a Delayed, Bigger Reward (B)

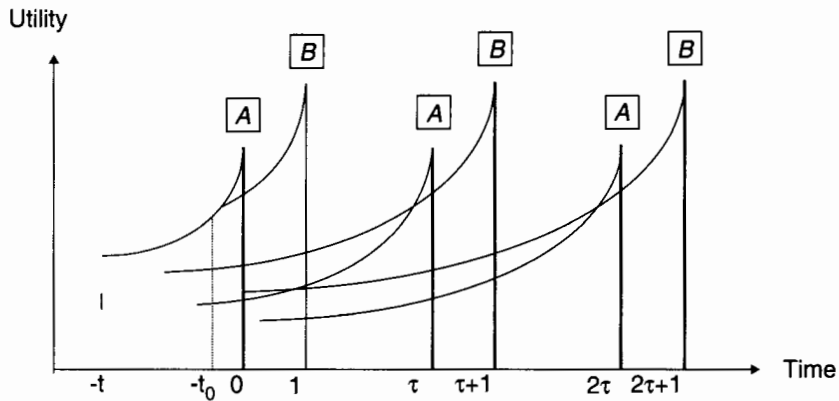


Figure 5A.2

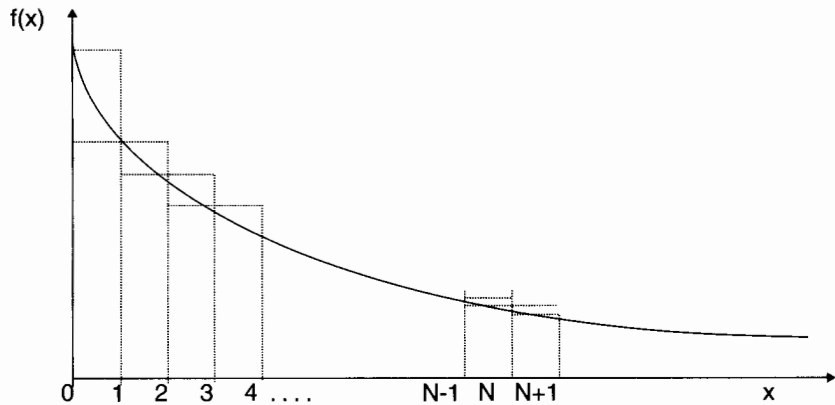


Table 5.1 Total Welfare of Two Consumption Careers for Consumers with Various Planning Horizons

Time Horizon (<i>N</i>)	Past Low Consumption		Past High Consumption	
	Continued low consumption	Switch to high consumption	Switch to low consumption	Continued high consumption
1	80.0	100.0	40.0	70.0
2	120.0	135.0	80.0	105.0
6	196.0	201.5	156.0	171.5
10	234.3	235.0	194.3	205.0
11	241.6	241.4	201.6	211.4
21	291.6	285.2	251.6	255.2
30	319.6	309.6	279.6	279.6
31	322.2	311.9	282.2	281.9
41	344.2	331.2	304.2	301.2

Table 5.2 Comparison of the Ainslie and the Becker-Murphy Theories, on Three Measures

Theory	Struggle to Get Out	How Problem Started	Relapse
Ainslie	<p>Explain difficulty by insufficient willpower. Explain struggle by dynamic inconsistency.</p>	<p>No systematic theory as yet. Could be based on too short cognitive horizon or insufficient information about risk and vulnerability.</p>	<p>Explained by erosion of willpower.</p>
Becker-Murphy	<p>Explain difficulty by myopia. No explanation of the struggle.</p>	<p>Explained by extraordinary circumstances or insufficient information and calculated risks (Orphanides and Zervos 1995).</p>	<p>No explanation.</p>

Figure 6.1 Instantaneous Utility

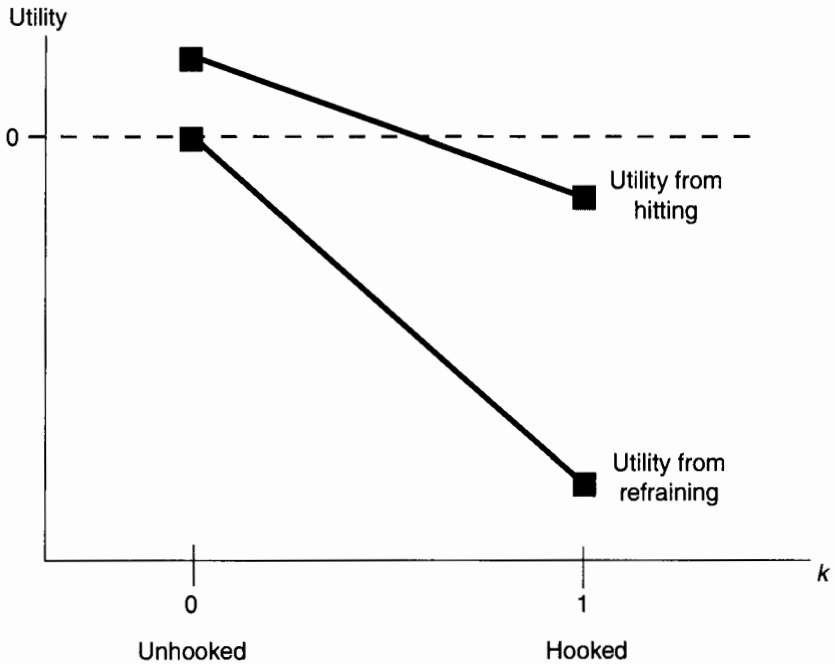


Figure 6.2 Future Benefit of Current Restraint

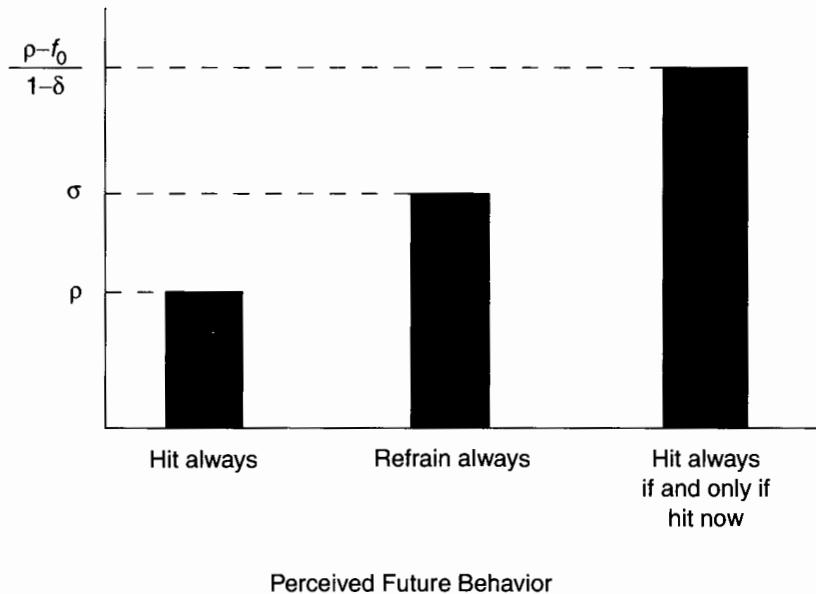


Table 6.1 Instantaneous Utility Function I

Condition	Utility from Hitting: $u_t(1, k_t)$	Utility from Refraining: $u_t(0, k_t)$
When unhooked ($k_t = 0$)	$f_t(0)$	$g_t(0)$
When hooked ($k_t = 1$)	$f_t(1)$	$g_t(1)$

Table 6.2 Instantaneous Utility Function II

Condition	Utility from Hitting: $u_t(1, k)$	Utility from Refraining: $u_t(0, k)$
When unhooked ($k = 0$)	f_t	0
When hooked ($k = 1$)	$f_t - \rho$	$-\sigma$

Table 6.3 Example 1

Condition	Utility from Hitting: $u(1, k)$	Utility from Refraining: $u(0, k)$
When unhooked ($k = 0$)	10	0
When hooked ($k = 1$)	-8	-25

Table 6.4. Example 2

Condition	Utility from Hitting: $u_t(1, k)$	Utility from Refraining: $u_t(0, k)$
In youth when unhooked	14	0
In youth when hooked	-4	-25
In middle age when unhooked	10	0
In middle age when hooked	-8	-25
In old age when unhooked	-5	0
In old age when hooked	-23	-25

Table 6.5 Example 3

Condition	Utility from Hitting	Utility from Refraining
On weekend when unhooked	13	0
On weekend when hooked	-2	-18
On weekday when unhooked	10	0
On weekday when hooked	-5	-18

Table 6.6 Example 4

Condition	Utility from Hitting	Utility from Refraining
On weekend when unhooked	18	0
On weekend when hooked	3	-18
On weekday when unhooked	10	0
On weekday when hooked	-5	-18

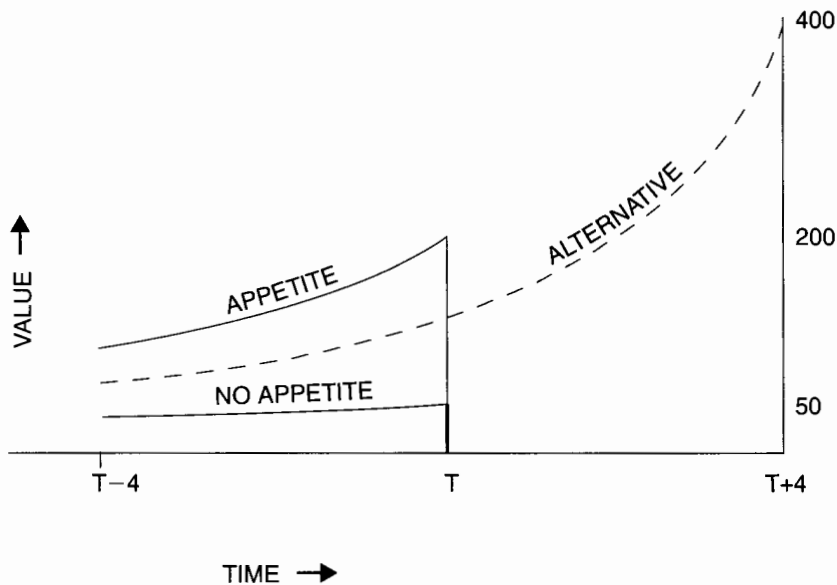
Table 6.7 Example 5

Condition	Utility from Hitting: $u(1, k)$	Utility from Refraining: $u(0, k)$
When unhooked ($k = 0$)	2	0
When hooked ($k = 1$)	-1	-5

Table 6.8 Example 6

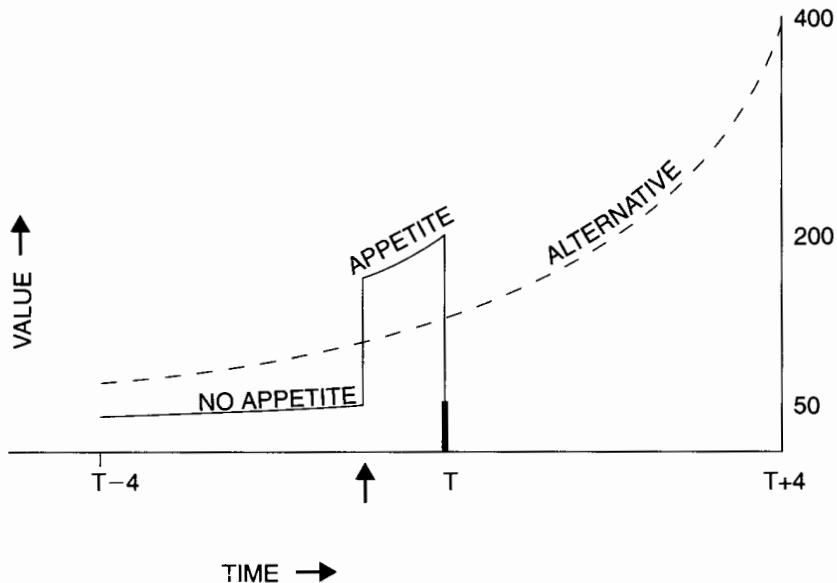
Condition	Utility From Hitting: $u(1, k)$	Utility from Refraining: $u(0, k)$
When unhooked ($k = 0$)	10	0
When hooked ($k = 1$)	-10.1	-10.1

Figure 7.1 The Effect of Appetite in an Exponentially Discounted Model



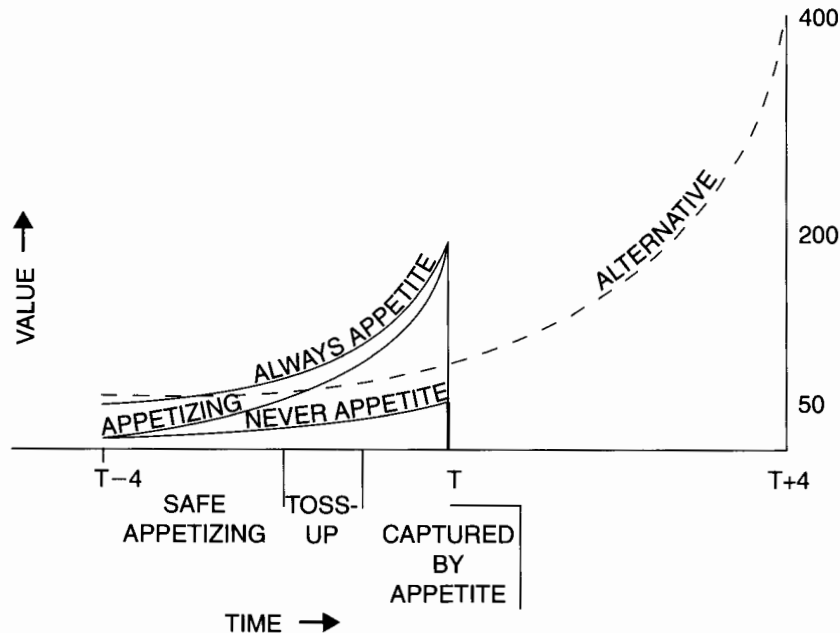
Note: Appetite may cause a smaller, earlier reward to be preferred to a larger, later alternative.

Figure 7.2 The Effect of Conditioned Appetite in an Exponentially Discounted, Two-Factor Model



Notes: A conditioned stimulus for appetite at the arrow increases the value of the smaller, earlier reward until it is temporarily preferred; but anticipation of this change would not lead to avoidance, but rather make the figure approach figure 7.1.

Figure 7.3 The Effect of Generating Appetite in a Hyperbolically Discounted Model



Notes: An organism that is motivated to avoid a smaller, earlier reward might still be motivated to generate some appetite, up to the point where the appetizing curve rises close to the discount curve from the preferred alternative; if it does not then stop generating appetite, its preference will reverse.

Figure 8.1

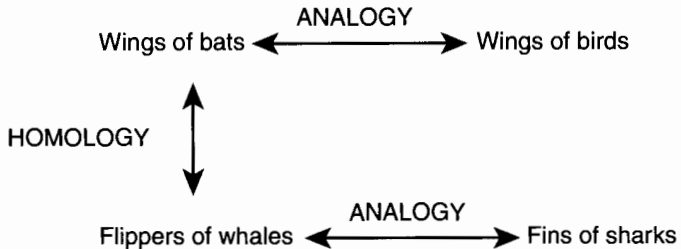


Figure 8.2

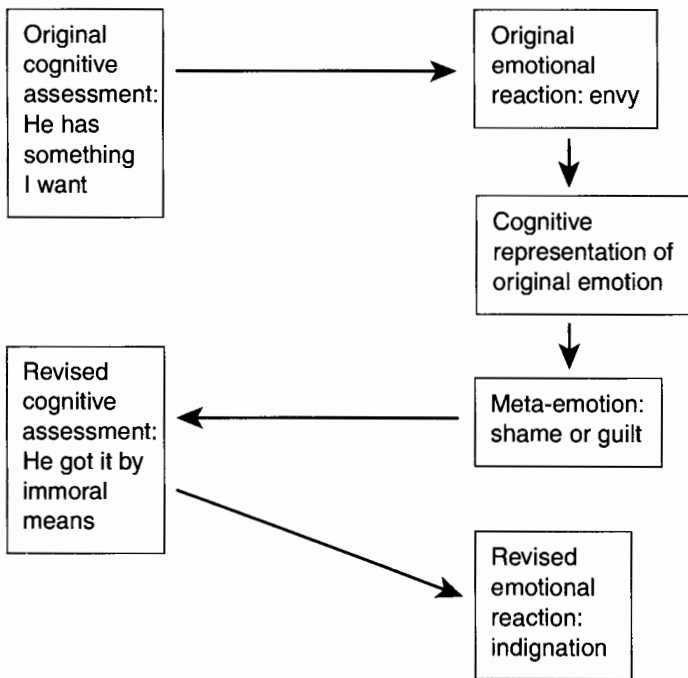


Figure 8.3

	Emotions triggered by	Cravings triggered by
Cognition	Complex emotions	Belief-dependent cravings
Perception	Fear Aesthetic emotions	Cue-dependent cravings
