

FOR LOVE OR MONEY:
SOME EMOTIONAL FOUNDATIONS OF RATIONALITY

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Abstract

Emotions represent what people value. Just as cognition concerns whether things are true and false; emotion is about whether they are good or bad. Thus, emotion may be a necessity for rationality, rather than its antithesis. Our emotion research shows that emotional feelings provide compelling information about the value of outcomes, actions, and objects. As a result, although they can also lead to excess, emotions provide a coherent basis for judgment and decision. In addition, I suggest that the current psychological theory is helpful in thinking about rationality because it assumes more than one mode of reasoning. Similarly, current emotion theory is helpful because it assumes more than one kind of good.

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A long tradition, stretching from classical philosophy to the present, views passion as the enemy of reason. Certainly emotion can lead to rash action, but admonitions to rise above our animal passions and substitute logic for emotion turn out to be bad advice. Results from psychology¹ and affective neuroscience² suggest that, in the final analysis, emotional considerations may be essential for attaining reasonable (adaptive and desirable) outcomes. We have even seen in recent years a surge of public and scholarly interest in the concept of “emotional intelligence,”³ a concept that classical philosophers would surely have found puzzling. In this Article, I review aspects of emotion theory to suggest a basis for believing that emotion may indeed be a necessity for reason.

Rational choice theory in economics and sociology has often been criticized for its insistence on evaluating behavior solely in terms of its utility and profit-maximizing potential. Many scholars have attempted to broaden the theory by suggesting that the notion of rationality might include noninstrumental as well as strictly instrumental and utilitarian behavior.⁴ It should be possible, they suggest, for behavior to be irrational economically but quite rational on noneconomic grounds. The problem with many of these attempts is that, while they are surely correct at some level, they frequently fail to be persuasive because of the ad hoc nature of the supplemental categories proposed. Emotion theory, on the other hand, provides a principled basis for expanding the narrow utilitarianism of rational choice theory.

In this Article, I focus on the problem of rationality of ends and suggest that emotion theory provides a way out of the conceptual dead end to which economic models often seem to lead. The basic point is simply that emotion is an embodiment of value. The importance of this assertion in the present context lies in the realization that “value” is critical to

1. Timothy Ketelaar & Gerald L. Clore, *Emotion and Reason: The Proximate Effects and Ultimate Functions of Emotions*, in COGNITIVE SCIENCE PERSPECTIVES ON PERSONALITY AND EMOTION 355, 387 (Gerald Matthews ed., 1997).

2. ANTONIO R. DAMASIO, DESCARTES' ERROR: EMOTION, REASON, AND THE HUMAN BRAIN 61 (1994).

3. Peter Salovey & John D. Mayer, *Emotional Intelligence*, 9 IMAGINATION, COGNITION & PERSONALITY 185, 189–91 (1990).

4. See, e.g., Raymond Boudon, *Limitations of Rational Choice Theory*, 104 AM. J. SOC. 817, 818 (1998); Milan Zafirovski, *Human Rational Behavior and Economic Rationality*, 7 ELECTRONIC J. SOC. (2003), at http://www.sociology.org/content/vol7.2/02_zafirovski.html.

rationality. Knowing whether one is acting rationally (in terms of reaching a desirable outcome) requires a criterion of value against which to judge whether an outcome is good. Emotion provides a powerful criterion. A positive emotion, such as joy, provides compelling experiential evidence of the desirability of an outcome, and a negative emotion such as disappointment signals that an outcome is undesirable relative to what was wanted or expected. Underlying such feelings are implicit cognitive, neurochemical, and physiological reactions, which also reflect the value of outcomes and support the experiential representation of value.

Emotion not only serves an informational role, signaling the value of things, but it is also an embodiment of such value. Rather than simply believing something to be of value, emotion creates a direct experience of that value. Emotion turns mere belief that something is good or bad into an experience of goodness or badness. Emotions are thus powerful states that are fueled by desires and aversions, making us hope for some outcomes and fear others. In this way, emotion not only adjudicates which outcomes are good and which are bad, but it encourages, through the carrot of pleasure and the stick of displeasure, actions consistent with such judgments.

I am arguing that emotions tell us whether we have chosen rationally. Of course, if a criterion of value is important for assessing the desirability of past outcomes, it is also important for assessing the desirability of potential or anticipated outcomes, and hence for making rational choices in the first place. The logic of this conclusion about the role of affect in judgment and decision making is buttressed by evidence from the study of breakdowns of decision making among individuals whose ability to read their own affective reactions has been compromised by damage to the prefrontal cortex.⁵ In addition, the results of behavioral studies of affect and judgment lead to similar conclusions.⁶

I. THE BASIS OF VALUE

The assumption that people always act in a purely self-interested fashion in choosing ends is surely false. For example, as Rubin points out, many people who had no obvious self-interest at stake involved themselves in citizen movements for civil rights, disability rights, and women's rights.⁷

5. *E.g.*, DAMASIO, *supra* note 2, at 61.

6. *E.g.*, Gerald L. Clore & Karen Gasper, *Feeling is Believing: Some Affective Influences on Belief*, in EMOTIONS AND BELIEFS: HOW FEELINGS INFLUENCE THOUGHTS 10, 38–39 (Nico H. Frijda et al. eds., 2000).

7. Edward L. Rubin, *Rational Choice and Rat Choice: Some Thoughts on the Relationship Among Rationality, Markets, and Human Beings*, 80 CHI.-KENT L. REV. ? (2005).

These and other altruistic actions would not fit neatly into an economic model, which assumes that choices must be manifestations of self-interest.

Economic models are quite useful for certain purposes. Their great virtue is that they allow quantitative modeling of choice behavior. Because accurate prediction of human behavior is made difficult by the enormous number of unknowns, quantitative modeling always requires some simplifying assumptions. Thus, even if it is not literally true that people always act in self-interested ways, it may still be strategically sound to assume that they do so for modeling purposes. Economists, partly for such practical, computational reasons, generally interpret self-interest in terms of monetary gains and losses, a move which is quantitatively useful but greatly limits the range of applicability of such analyses. A point made in the final section of this Article is that people are motivated not by money, but by the value it represents, and that it is important to distinguish underlying value from monetary or emotional representations of that value. Now, however, let us consider what it means to say that emotions are representations of value.

II. EMOTIONS AS EMBODIMENTS OF VALUE

If cognition is about truth and falsity and is concerned with categorization, then emotion is about goodness and badness and is concerned with evaluation. Emotions are embodied evaluations, and much of their variety comes from the particulars of what is being evaluated. Emotion can be thought of as similar to pain, in that it involves both information and motivation. For example, the feeling of negative emotion, like the feeling of pain, provides us with distinctive information that something in particular is wrong. Emotions and instances of pain also vary in terms of intensity, which, in both cases, provides a rough guide to the seriousness of the problem. The information from pain is about tissue damage, whereas the information from emotion is about value—that is, about the goodness and badness of things.

Pain is a somewhat simpler system than emotion in that we have specialized receptors in the skin that are partly responsible for pain. In contrast, we do not have specialized detectors of value. Instead, we arrive at the emotional significance of events, actions, and objects through some sort of cognitive appraisal process. Such cognitive appraisals may be made lightning fast or may be extended in time, but however they are made, such evaluations are core features of the resulting emotions.

A variety of theoretical accounts of the relationship between such appraisals and the structure of emotions have been proposed. One of these, known in the cognitive science literature as “the OCC Account,”⁸ is especially useful for the present purposes because it lays out the ways in which the various types of emotions reflect underlying kinds of value.

III. KINDS OF VALUE

According to the OCC Account, emotional reactions reflect three distinct kinds of good, one for each of the possible kinds of things upon which attention can be focused.⁹ As depicted in Table 1 below, these points of focus include the outcomes of events, the actions of agents, and the attributes of objects.¹⁰ These three kinds of focus are intended to be comprehensive. For example, “objects” can include not only physical objects, but places, people, ideas, activities, and so on. Thus, one can appraise outcomes as desirable or undesirable, depending on whether they further or thwart one’s goals.¹¹ One can appraise actions as praiseworthy or blameworthy, depending on whether they meet or fall short of applicable standards.¹² Or, one may appraise objects as being appealing or unappealing, a judgment that depends on one’s tastes and attitudes.¹³

Just as there are three kinds of focus and three bases for appraisals, the theory also envisions three kinds of affective reactions—being pleased or displeased about outcomes, approving or disapproving of actions, and liking or disliking objects.¹⁴ Specific emotions, then, are differentiated forms of these affective reactions.¹⁵ Being happy, sad, or fearful about outcomes are forms of being pleased or displeased.¹⁶ Being proud or ashamed of actions are forms of approval or disapproval.¹⁷ Finally, loving, hating, or being disgusted at objects and their attributes are reactions that can be thought of as forms of liking and disliking.¹⁸

TABLE 1 Appraisals of events, actions, and objects are based on different sources of value and are manifested as different kinds of affective reactions, which are differentiated into specific emotions.

8. See generally ANDREW ORTONY, GERALD L. CLORE & ALLAN COLLINS, *THE COGNITIVE STRUCTURE OF EMOTIONS* (1988) [hereinafter OCC ACCOUNT].

9. *Id.* at 18–19.

10. *Id.* at 18.

11. *Id.* at 53.

12. *Id.*

13. *Id.* at 56.

14. *Id.* at 33.

15. *Id.*

16. *Id.* at 107.

17. *Id.* at 19, 154.

18. *Id.* at 19, 171.

FOCUS OF ATTENTION	Outcomes of Events	Actions of Agents	Attributes of Objects
SOURCE OF VALUE	Goals	Standards	Tastes/Attitudes
APPRAISAL	Desirable or Undesirable	Praiseworthy or Blameworthy	Like or Dislike
AFFECTIVE REACTION	Feel Pleased or Displeased	Feel Approval or Disapproval	Feel Liking or Disliking
EMOTION	Joy, Sadness, Fear, etc.	Pride, Shame, etc.	Love, Hate, Disgust, etc.

Source: ANDREW ORTONY, GERALD L. CLORE & ALLAN COLLINS, *THE COGNITIVE STRUCTURE OF EMOTIONS* (1988).

The OCC Account of the cognitive structure of emotions has a number of implications for understanding the variety and intensity of emotion types.¹⁹ The approach was designed with the requirements of computer modeling in mind. The idea was not to make computers feel emotion, of course, because feelings require the appropriate physiology. Instead, the goal was to write the rules governing emotion elicitation and emotion intensity and to do so in a sufficiently systematic way that a computer program could employ them as a knowledge base for making appropriate inferences about people's emotions in particular situations. The chief impact of the theory has been in the fields of computer science and artificial intelligence, where the OCC rules have become useful components of what are called "believable agents." Believable agents include virtual teachers in tutorial or computer training programs and characters in interactive computer games. It turns out that such interactive computer agents are more effective tutors and more likeable and engaging characters when their responses are guided by knowledge about the emotional reactions most likely to arise in particular situations and knowledge about how intense such reactions are likely to be.²⁰

The OCC account of emotion organizes twenty-two different emotion types into six emotion families.²¹ Although the emotions in the theory are designated by English words, the theory is not about emotion language, but about the emotions themselves. Thus, for each of the twenty-two emotion types, a given language might contain many lexical tokens. Each emotion

19. *Id.* at 181.

20. For examples, see Clark Elliot, *Summary of Affective Reasoner Information* (1997), at <http://www.depaul.edu/~elliott/ar/> and Press Release, Zoesis Studios, Zoesis Studios Unveils New Interactive Attractions at TheLivingLetters.com, the Internet's Only Expanding Theme Park for Children (Nov. 14, 2000), at <http://ottoandiris.com/corporate/release3.html>.

21. OCC ACCOUNT, *supra* note 8, at 19, 192.

type is characterized by its cognitive or situational eliciting conditions, by the cognitive factors that influence its intensity, and by examples of situations in which it might be felt. The specifications for emotions in the fear type are shown in Table 2, as an example.

The OCC model describes the cognitive structure of emotions. That is, it maps the emotions in terms of the kinds of psychological situations in which one rather than another emotion is likely to be elicited. It includes analyses of particular emotions, such as the relatively complex emotion of anger, which is viewed as arising from a joint focus on undesirable outcomes and blameworthy actions. The intensity of anger also depends both on how undesirable the outcome (e.g., one might be more angry at oneself for losing \$1000 than for losing \$10) and on how blameworthy the action (e.g., one might be more angry at someone completely at fault than someone only partially at fault).

TABLE 2 Specifications of fear as an example of one emotion type within the prospect-based family of emotions

Family	Prospect-Based
Emotion Type	Fear
Associated Lexical Items	Apprehensive, anxious, dread, fear, fright, nervous, petrified, scared, terrified, timid, uncomfortable, worried, etc.
Eliciting Condition	Prospective undesirable event
Intensity increases with	1. Degree to which event is undesirable 2. Likelihood of the event
Example	A person at home alone hears an intruder enter the house

For our present purpose, the most important aspect of the OCC account of emotion concerns the three different sources of value, which are ultimately the bases for our caring about outcomes, actions, and objects. Events are occasions of joy or distress, for example, only to the extent that some outcome is experienced as potentially relevant to one's goals and concerns. Some events, such as finding a snake in one's house, are likely to be distressing to most people, whereas other events, such as finding a grasshopper in one's house, may be distressing to very few people. Similarly, some actions, such as getting drunk, might be an occasion for shame or embarrassment for some people, whereas for some college students, it might occasion pride. The difference, according to the OCC account, would depend on whether one viewed that behavior as falling short of, or as exceeding, some important standard of behavior. Similarly,

an object such as a political candidate or an item of food might elicit liking in some people and disliking in others, depending on the compatibility of the candidate or the food with relevant attitudes or tastes. Additionally, a single event could elicit emotions in all of these categories in rapid succession as one's attention shifted from one aspect of the event to another. Thus, learning that one's neighbor physically abused his wife might make one alternately feel sympathy for the wife, anger at the husband's action, and dislike for the husband himself as one's focus shifts from the undesirability of the outcome for her, the blameworthiness of his action, and the repugnance of a person who would do such a distasteful thing. Emotion, then, depends on the perception of something as good or bad in some way with the particular kind of emotion depending ultimately on the particular kind of goodness and badness involved. The kind of value is, in turn, dependent on momentary shifts in attention. This glimpse of the attentional, cognitive, and value components of the emotional elicitation process is intended to suggest that there is some logic to emotion, a fact that is too often obscured in discussions of emotion in the judgment and decision-making literature. Now, we are prepared to ask about emotion and rationality.

IV. EMOTION AND RATIONALITY

Within the rational choice model, the assumption that people's actions are ultimately guided by self-interest still requires knowing what people will see as in their self-interest.²² Emotion theory is potentially useful in this task because it offers a basis for expanding what it might mean to say that people act in a self-interested way. The idea that self-interest should be definable solely in economic terms limits the applicability of the hypothesis to situations in which a translation into monetary terms is possible. Attempts to translate nonmonetary value into monetary value do occur in many domains. Judgments involving punitive damages are a prime example. Judges and juries are frequently asked to decide how much money would compensate a person whose loss has resulted from the blameworthy action of another. In some well-known cases, such as the continuing saga of the Exxon Valdez oil spill, an army of consultants have been called upon to suggest how such damages might be fairly assessed. One proposal involves surveying people about how much money a clean environment is worth to them. Making such judgments turns out to be quite

22. Of course, the rationality of ends idea often also includes the belief that people *should* act in strictly self-interested ways so as not to disrupt the efficient workings of markets. However, once such a prescriptive element is introduced, science and dogma become conflated, making the assertion an article of faith rather than a hypothesis about behavior.

difficult, and emotion theory helps explain why that should be the case. In addition, it clarifies why in some cultures, any attempt to recompense a person who had been wronged by offering them money would only compound the offense. Of course, all of us find attempts to put a price on some things to be inappropriate. For example, attempting to exchange money for love is generally looked down upon,²³ probably even by those who attempt to do so.

According to the OCC approach to emotions, there are multiple kinds of goodness and badness. Moreover, these multiple kinds are assumed to be incommensurate, which means that there are in principle no equations which would allow one to solve for the price of beauty or the cost of disloyalty. People have long considered it a devil's errand to try to "economize" moral or immoral action. Indeed, the legend of Faust concerns a hapless individual who tried to use his morality as barter for wealth, leisure, and status. In none of the many versions of the tale does Faust's pact with the Devil have a happy ending, suggesting (to those with ears to hear it) that there is no efficient market for the soul. The longevity of the Faust legend attests to the idea that people long ago realized that there are naturally different kinds of value, which cannot be shoehorned into a single kind of value.

The suggestion that we need to recognize additional kinds of value beyond utilitarian or economic value is an idea that rational choice theorists are likely to reject. They would surely argue that opening up the basis of valuation to multiple kinds of value would make the task of accounting for behavior unmanageable. However, emotion theory is not an open-ended system implying countless sources of value. It assumes only three: goals, standards, and tastes. Moreover, one can argue that its claims are not in the least arbitrary. On the contrary, emotions are bodily representations of value that have evolved in our species over eons. It is not clear that there could be any more solid basis for establishing value than that. Three kinds evolved, we argue, and serve as engines for the variety of universally shared emotions we observe.

If we allow emotion theory to augment analyses based on economic costs and benefits with additional sources of valuation, then otherwise irrational behavior becomes reasonable. For example, there would be nothing irrational about spending more to sue one's neighbor than one stood to gain, if the cash settlement were supplemented by some other kind of good, such as seeing justice done. Of course, rational choice proponents might still rightly complain that whereas utilitarian good has a useful

23. URIEL G. FOA & EDNA B. FOA, SOCIETAL STRUCTURES OF THE MIND 218 (1974).

metric, none exists for moral or aesthetic good, making behavior evaluated in these terms much more difficult to model quantitatively.

V. EMOTIONAL ACCOUNTING

One problematic consequence of the fact that we have evolved to respond to multiple kinds of value is the problem of emotional accounting. I have argued that emotions are registrations of the appraised value of outcomes, actions, and objects. There are two ways in which such emotional reactions can be powerful. One way is by being directed at a specific object. Emotions typically have objects, so that one is not simply angry, but rather one is angry at some particular person about some particular action. Having a specific object makes an emotion powerful because resources can then be directed to cope with that problem or to seize that opportunity.

A second way in which emotional reactions can be powerful is, paradoxically, by not having an object. Moods are examples of affective states that are similar to emotions, but for which the object, if any, is not salient. As a result, one may experience an affective reaction without any clear cause or meaning. Depression has this character, as do states of general anxiety. In such states, one may feel down or apprehensive, but without knowing why. The power of such states is a bit like the power of a flood—indiscriminate, affecting whatever happens to be in its path. Why do objectless affect so promiscuous?

Emotions reflect the results of appraisal processes that are largely automatic and unconscious. The feelings of emotion provide conscious information about the results of such unconscious appraisals. Emotions evolved in part to signal that some specific stimulus has positive or negative value. At least when such mental content is conscious, one usually knows the object of one's emotion. However, when the real object is not salient at the time, then the feelings tend to take as their object whatever comes to mind, an observation made by many writers from Freud to the present. Again, for this reason, a problem with depression is that it tends to taint whatever one thinks about. In a similar way, anxiety can be exhausting in part because, without a clear object, there is no way to isolate a specific threat so that one can deal with it. One can view these kinds of problems as problems in keeping straight what our affective reactions are about, which are problems of affective accounting.

As the CEO of one's own self, it is important to keep accurate books, to know where resources are going and where they are needed. Insistent indications that problems exist but cannot be located may make it seem like everything is falling apart. One of the functions of psychotherapy is to

assist individuals experiencing such mental accounting problems. Clients often come to therapists depressed or anxious, with vague complaints, or feeling that everything is going wrong. The therapist's role is often to encourage the client to talk about the problem in order to help him or her arrive at a useful mental accounting. When a cause is located, the client's diffuse mood state can turn into a specific emotion, because it is then experienced as being about something in particular. During such emotional bookkeeping, people often begin to see that many things that are important to them are not in the problematic account. The person may experience great relief as the locus of the problem narrows. Of course, identifying the cause may bring new problems to the fore, but at least they are likely to be more specific and identifiable.

VI. ACCOUNTING FOR MULTIPLE GOODS

Issues of accounting—keeping track of what is causing what—also surface in other ways. The source of an experience may be quite clear as long as it is experienced by itself, but the experience may become less accountable when a separate cause produces a very similar experience at the same time. This process is clearly evident in the domain of visual experience. In vision, different but highly redundant images are presented by the two eyes. Our eyes move together so that the images that are projected are almost, but not quite, the same. Indeed, they are so similar that it is impossible to keep straight which image is coming from which eye. When visual accounting fails because it is impossible to keep books on which eye is contributing which image, we see an emergent three-dimensional image rather than separate, flat images from each eye. We see objects in hologram-like reality as both eyes provide parallel, but slightly different images of the same thing. Presumably, such emergence reflects the fact that it is computationally simpler to see one object as “out there” rather than keeping track of two highly redundant sensory streams.

A related principle appears to operate when we apprehend more than one kind of goodness or badness simultaneously emanating from a single object. Consider a political leader whose policies are good in a utilitarian sense, who also engages in admirable actions, and who is additionally handsome and well-spoken. Such a figure may command a degree of loyalty that none of these attributes by themselves would have elicited, in part because of the difficulty of keeping straight what aspects of our experience of goodness comes from what source. As a result, the leader may be experienced as transcendentally good. Through a similar process, people fall in love not only because their beloved helps in the satisfaction of their goals (utilitarian good), but also because they may be seen as

excellent or admirable in some way and because they may seem beautiful or handsome. The emergent experience of their goodness becomes, in fact, beyond accounting. Falling in love thus renders some people inarticulate, while it inspires others to poetry. Both reactions may flow from the same impossibility of sorting out which aspects of one's fascination with the other are accounted for by which aspects of their goodness.

There are many such emergent experiences that may arise for similar reasons. Thus, the experience of nostalgia may be one in which one experiences oneself in the present remembering something in the past, feeling at once the immediacy of a sweet memory of an event at the same time that one is experiencing the sadness of its distance in time. Similarly, an intimate conversation or romantic encounter may seem important not only because it may be intense, but perhaps also because one constructs from the visual, verbal, and nonverbal feedback from the other a model of their experience at the same time that one entertains one's own view. To the extent that partial redundancy blurs clear accounting, a joint experience may emerge. The process is also seen in an operatic duet or a string quartet, in which rather than hearing only music from separate players, a new entity emerges in one's experience that transcends their individual contributions. In the interpersonal situation, such convergence may be experienced as a vital entity that is somehow more than each person's input. Couples often point to such experiences as the moment in which they fell in love.

Are such experiences illusions? Perhaps no more than three-dimensional images are illusions. I am suggesting that failures of emotional accounting, just like those of visual accounting, allow one to experience multiple facets of the same person, place, or event at the same time. In the emotional case, the different sources of good are incommensurate, meaning that they cannot be translated or equated. They must remain separate, but because they emanate from the same entity and are apprehended at the same time, no such accounting is possible so that a multifaceted new entity emerges in experience that is all of these incommensurate but redundant things at once. One can then experience them as one emergent reality, such that the whole can be appreciated as more than its parts, which, of course, it is.

In summary, I have suggested that, somewhat surprisingly, the assertions of emotion theory might make it more rather than less sensible to say that people's choices are guided by rational ends. People's choices are probably not narrowly self-regarding in the sense that they seek only positive outcomes for themselves. However, their choices may still be guided by what they care about. Emotion theory makes clear that the category of things people care about is more diverse than economic ends or

than any strictly utilitarian ends. By distinguishing three different and incommensurate sources of value that fuel the emotions, we see that even choices that reduce one's financial outcome can be rational if they achieve some other kind of good. I argued that each of these kinds of good have an equal call to legitimacy because specific emotions evolved to provide embodied information about that particular good and to engender sufficiently urgent motivation to drive actions and choices. In this view, emotion becomes the seat of rationality, rather than its undoing.

Thus far, we have discussed emotion theory as an alternative to economic models. However, I suggested in the sections on affective accounting that there is a sense in which the problem of accounting is important in both worlds. In the final section, I suggest still further that economic and emotional phenomena may not be at odds after all. To the extent that both emotion and money are representations of value, we find that they inhabit parallel worlds.

VII. THE AFFECTIVE ECONOMY

"Affect" refers to embodied evaluative reactions. Affect, like money, is a token of value. In spending our money, whether following our emotions is rational or irrational in terms of results depends on the relationships between these tokens of value and the underlying value. If we buy something for more than it is worth, we have behaved irrationally. If we get angrier than is warranted by another's blameworthiness, fall in love with an unworthy person, or pledge loyalty to a demagogue, we are irrational, not because we have followed our emotions, but because we have acted on value that was not there.

Does this "affect-as-token-of-value" approach have other implications?

Are there useful parallels between the behavior of affect and money? Yes, it appears that there are. Depression, for example, occurs not only in the monetary economy, but also in the affective economy. It is a process whereby there is a shortage of value tokens—whether it is a depressed monetary economy or a depressed affective economy. One has nothing to invest, and the problem is then that one has no expectation of return either. In depressions, money and affect are scarce.

There is perhaps also an analogy with respect to inflation. In monetary inflation, the amount that a dollar will buy decreases. A specific unit of currency comes to have less value. Something analogous also occurs in affective inflation. Promiscuity, gambling, drug taking, and other risky activities can be thrilling and can elicit unusually large amounts of dopamine, which supports powerful affective experiences. For example,

taking particular drugs can produce the kind of experience that would signify that something wonderful has happened, when in fact nothing of significance has occurred at all. Alcohol and certain other drugs can make one feel that one's powers have been magnified and that one is charming and desirable. The problem is that the feelings produced in this way often turn out to be inflated because their apparent value is not backed by hard reality. In monetary economies, when large amounts of money are suddenly introduced without increases in production, the relationship between tokens of value and underlying value becomes similarly distorted. In the affective economy, when more affective currency (e.g., dopamine) is produced than is warranted by the underlying value of its causes (desirable events, praiseworthy actions, appealing objects), the same thing happens. The result is that the feelings (or a given charge of dopamine) lose value. Everyday activities lose value because they cannot produce enough of a high, so one loses motivation.

Hedonism is a powerful explanatory assumption. Pleasure and pain look like the universal currency of behaving systems. But just as economists should not conclude that our prime motivation is to make money, psychologists also should not assume that our prime motivation is to make pleasure. Money, like positive affect, is a representation of value. A fallacy of materialism and hedonism is the assumption that the function of behavior is to maximize *representations* of value, rather than to maximize value itself.

In the monetary economy, hoarding is the attempt to accumulate tokens of value rather than spending or investing those tokens on something with underlying value. It appears that the economy is more healthy when money is used as a medium of exchange, rather than as a commodity in itself. If so, then there would appear to be an analogous affective process.

The paradox of affect is that we are motivated by positive affect, and yet pursuing positive affect for its own sake is seldom successful. The basic cause of this curious fact presumably concerns the value-conferring aspect of affect. Ordinarily, affect serves as information.²⁴ That is, the experience of affect provides information about value. A positive response means that something of value has been encountered. When the focus is on things other than itself, such responses confer value on those things. But if one is focused on pleasure itself, then value is simply conferred on pleasure. In this onanistic process, no value or meaning is transferred to anything else.

24. Norbert Schwarz & Gerald L. Clore, *Mood, Misattribution, and Judgments of Well-Being: Informative and Directive Functions of Affective States*, 45 J. PERSONALITY & SOC. PSYCHOL. 513, 520 (1983).

From the examples of Greek and Roman societies to our present society, we are told that prosperity is paradoxically unhealthy for societies.²⁵ Once people succeed in driving the wolf from their door and become affluent, things often seem to unravel as individuals cease investing their labor and concern in things that pay dividends and invest instead only in the pleasure itself. In any case, the paradox is that money and positive affect are both good only so long as they serve as means and not as ends.

In the monetary economy, scarcity of money leads to hoarding, which exacerbates the scarcity. Without any investment of money, nothing of value is produced to be exchanged, further reducing available money. Does scarcity of affect create affective hoarding? One suspects that it might. People who are emotionally down seem less likely to invest the emotional resources they have, which further reduces the possibility of a rewarding response. Withdrawing from emotional investment seems likely to further reduce emotional rewards.

In summary, I have argued that there is perhaps a useful analogy between affect and money in that both are tokens of value. The question raised in this final section is whether there are parallels between human behavior with respect to these tokens of value. In addition to the parallels concerning accounting discussed in previous sections, I have suggested three parallels, including depression, inflation, and hoarding. The implication is that our ultimate motivation is neither for money nor pleasure, but for the underlying good which they signify. Many psychologists are currently focused on the problem of emotion regulation. But maximizing pleasure and minimizing pain in the short run is less important than investing one's efforts (and hence one's affect) in endeavors and relationships that pay affective dividends. The important kind of affect regulation perhaps is that which is focused on conserving the valuing capacity of the appraisal system in order to keep the currency of affect sound.

25. See generally DAVID C. McCLELLAND, *THE ACHIEVING SOCIETY* (1961).