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On Romantic Love—An Analysis of Open System Economic Behavior

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ABSTRACT

Romantic love is characterized by a preoccupation with a deliberately restricted set of perceived characteristics in the love object which are viewed as means to some ideal ends. In the process of selecting the set of perceived characteristics and the process of determining the ideal ends, there is also a systematic failure to assess the accuracy of the perceived characteristics and the feasibility of achieving the ideal ends given the selected set of means and other pre-existing ends.

The study of romantic love can provide insight into the general process of introducing novelty into a system of interacting variables. Novelty, however, is functional only in an open system characterized by uncertainty where the variables have not all been functionally looped and system slacks are readily available to accommodate new things. In a closed system where all the objective functions and variables must be compatible to achieve stability and viability, adjustments in the value of some variables through romantic idealization may be dysfunctional if they represent merely residual responses to the creative combination of the variables in the open sub-system.

> If human nature felt no temptation to take a chance, no satisfaction (profit apart) in constructing a factory, a railway, a mine or a farm, there may not be much investment merely as a result of cold calculation.
>
> J. M. Keynes

1. Introduction

Romantic love is characterized by a preoccupation with a deliberately restricted set of perceived characteristics in the love object which are viewed as means to some ideal ends. Most importantly, in the process of selecting the set of perceived characteristics and the process of determining the ideal ends, there is also a systematic failure to assess the accuracy of the perceived characteristics and the feasibility of achieving the ideal ends given the selected set of means and other pre-existing ends. Not surprisingly, romantic love is doomed to a very short life.

The idealization process of romantic love (Kremen and Kremen, 1971) is by no means confined to mate selection among men and women. The same process is

involved in any choice situation involving uncertainty. The study of romantic love, therefore, can provide insight into the general process of introducing novelty into a system of interacting variables.

This paper analyzes the role of romantic idealization in choice situations under certainty and uncertainty. And by relating the concepts of certainty and uncertainty to the concepts of closed and open systems, the creative potential through romantic idealization is assessed in the context of economic growth.

2. Romantic Idealization Under Certainty

If we are confronted with a choice situation in which all the alternatives, the outcomes associated with each alternative and the probability accompanying each outcome are known, we can choose the best alternative with little difficulty once the objective function to be optimized is given. This then is a case of choice under certainty with simple risk (Wolfson and Carroll, 1976). Selection based on romantic idealization is not an optimal decision-making strategy under such a situation.

Specifically, romantic idealization may suboptimize in three ways. First, it may exclude alternatives and outcomes which objectively exist but which it subconsciously or consciously overlooks. In other words, it may lead to contrived ignorance. Second, it may include alternatives and outcomes which do not objectively exist but whose existence it romanticizes. Third, it may overestimate the values of some outcomes and underestimate those of others through deliberate self-deception. The second and third ways may be called romantic error (Wolfson and Carroll, 1976).

3. Romantic Idealization Under Uncertainty

On the other hand, we may have a choice situation where little is known about the alternatives, the outcomes, the values of the outcomes, and the probability of the outcomes. This is then a case of choice under uncertaintly where possibility for ignorance and error abounds (Wolfson and Carroll, 1976).

In a situation of uncertainty, romantic idealization encourages novel behavior to be attempted. In general, novel behavior carries an element of compound risk[1] which may be extremely costly if the outcome is unfavorable. This is especially true in cases where an action is not reversible, or can only be reversed at great costs. And since novelty by definition requires the establishment of new feedback loops and the destruction or bypassing of old feedback loops, the chance of a favorable outcome is very small although there may be a scale economy if enough people attempt it and a new feedback loop can be functionally established. Inasmuch as romantic idealization involves an unconscious underestimation of the chance of failure and

[1] Compound risk involves ignorance and error of alternatives, outcomes, the values of outcomes, and inadequate information about the probability distribution of possible outcomes for each alternative. Here ignorance indicates "that state of knowledge wherein the decision-maker lacks awareness of some objectively possible states of the world he faces." And error indicates that "state of knowledge wherein the decision-maker believes that there are some alternatives, outcomes, or values which, in fact, do not exist." Simple risk involves only an absence of any one-to-one correspondence between alternatives and outcomes. But accurate information on the probability distribution of possible outcomes for each alternative is assumed (Wolfson and Carroll, 1976).

overestimation of the chance of success and the size of the payoff, it is conducive to creativity.

In other words, romantic idealization facilitates choice in three ways. First, it facilitates some actions in situations where cold calculation alone would have led to inaction or outright paralysis due to inadequate information. Second, it increases the rate of knowledge accumulation since improved knowledge through feedback from current actions leaves less room for romantic idealization and forces it into unexplored territories. Third, since possibility for novelty is most abundant in uncharted territories, this constant tendency of romantic idealization to invade them promises a greater gain from novelty.

4. Romantic Love and Mate Selection

Romantic love is the paramount choice strategy in mate selection in modern times. As is well known, marriage based on romantic love is correlated with high divorce rate. Does high divorce rate indicate the inevitable result of trial and error in choice under uncertainty or is it simply a reflection of the high cost of contrived ignorance and romantic error in choice under certainty?

Marriage and the mate selection process preceding it are probably coterminus with human history. The accumulated knowledge on what makes a marriage work under various social and economic conditions, though not always systematized, must be substantial. Given this knowledge, optimal pairing can be brought about once the relevant characteristics of the potential partners are known. A choice strategy which facilitates the gathering and processing of information on the relevant characteristics of the potential partners is therefore preferable to others which do not.

An ideal arrangement would be one in which the potential partners or the parties representing them compete to offer information about themselves and their competitors much like competitive sellers in a market situation. On the other hand, the party that invites offers from potential partners acts like a buyer in a competitive market. It could then compare the potential candidates without commitment to any particular one. But it is also subject to competition from the buyers' market. If, furthermore, the information gatherers are not the candidates themselves but the dispassionate and more experienced parties who have a stake in the welfare of the candidates involved, contrived ignorance and romantic error can be reduced to the minimum. This arrangement is approximated by the institution of arranged marriage through match-makers in traditional societies.

On the other hand, romantic love as a choice strategy precludes the simultaneous consideration of more than one candidate due to its rigid rule governing reciprocity. In this respect, it can be compared to a high pressure salesmanship situation where a supposedly large price discount is available only if a decision to buy can be made on the spot. Needless to say, this is not by any means the best way to gather information on other potential candidates. Also, since romantic love also precludes divergent advice from the candidates' more experienced elders, the candidates often choose their partners with little knowledge about what makes a marriage work.

If romantic love is not the best way to gather information about potential mates, can the possibility of large potential gain through novelty justify it? Against this possibility, there is the counter possibility that since marriage and mate selection have been practiced for so long in human history, what is novelty today may represent what has already been tried and rejected long ago because there is little or no gain from it. We must also consider the possibility that the modern preference for romantic love as a choice strategy in mate selection may represent merely a spillover of the dominant ideology more applicable to other choice situations and that the apparent possibility for novelty may reflect merely structural disruptions brought about by functional adjustments in other choice situations. The high divorce rate may also be a result of conflicting objectives imposed on the modern family. It will be argued in a later section that these conflicting objectives are themselves a result of the exercise of romantic idealization.

5. Certainty and Uncertainty in a Systems Perspective

Whether romantic idealization is a functional choice strategy depends, therefore, on whether a choice situation is characterized by certainty or uncertainty. For our present purposes, the concepts of certainty and uncertainty can be productively discussed in the perspective of closed and open systems. A closed system is an interaction system in which all of its parts have been functionally looped with little or no surplus capacity (slacks) for novelty. This concept is similar to that of a climax community in ecology. It should be noted, however, that the concept represents merely a polar abstraction. On the other hand, an open system is an interaction system in which some of its parts have not been functionally looped with surplus capacity (slacks) for novelty in the rearrangement of feedback loops (Fung and DeSerpa, 1978).

The relation between the concepts of certainty and uncertainty and the concepts of closed and open systems can be illustrated in terms of combinational possibilities. Suppose we have a system of n elements to be combined r at a time, there are then nCr possible combinations. Once these combinations and their associated outcomes are known, it can further be determined which of them optimizes a given objective function. If the objective function stays unchanged, the best combination is automatically determined. This is then a closed system where novelty and learning have no place. And the only element of uncertainty is the risk associated with the outcomes. But, if the objective function changes, new elements are added and/or the value of r changes, new combinations are possible. In the adjustment process, neither the possible new combinations nor the outcomes associated with these combinations are known. To say nothing of the risk accompanying the outcomes. This then is an open system with a large element of uncertainty. But it also provides room for creativity and the more desired outcomes resulting from it.

As an example of a closed system under certainty, we can look at the cattle–manure–grass interaction loop on a fixed amount of pasture. When the available resources are fully utilized under the existing technology, the number of cattle cannot be increased unless the amount of grass is increased. And the amount of

grass cannot be increased unless the amount of manure is increased. But the amount of manure cannot be increased unless the number of cattle is increased. In this closed interaction loop, the number of elements is fixed. And given the objective of maximizing the number of cattle, the optimal combination of the elements is determined subject to simple risk. Any other combination would have been eliminated through a long period of trial and error. A choice strategy involving romantic idealization could only lead to suboptimal combinations due to contrived ignorance and romantic error.

The introduction of chemical fertilizers into this interaction loop adds an extra degree of freedom to an otherwise closed system. Under this new condition, the number of cattle can be increased independently of the amount of manure they produce. The independence between the chemical fertilizers and the number of cattle thus "opens up" the previously closed interaction loop as the amount of manure is no longer relevant to the production of cattle (Fung and DeSerpa, 1978). In this open interaction loop, the number of elements is increased and their possible combinations have to be discovered. Also, the risk associated with the outcomes of these combinations is largely unknown. But some of these novel combinations promise a larger cattle output. On the other hand, the untried and unfamiliar chemical fertilizers may also bring uncertain and unforeseeable perils. The leap from manure to chemical fertilizers could not have been easily taken without a large dose of romantic idealization.

6. Romantic Idealization and Economic Growth

Since economic growth is by definition impossible in a closed system where all its parts have been functionally looped to fully utilize the available resources at existing technology, it is imperative that the system is kept open if economic growth is to be maintained. In general terms, the system is kept open by selective attention to a limited set of system variables.

In a closed system, the values of all the system variables have to be determined simultaneously to achieve economy and compatibility. In an open system, attention is focused on only a selected set of target variables (objectives). And specific instrumental variables are created to achieve the freely chosen values of these target variables. Provided that the number of instruments is at least equal to the number of targets, the freely chosen target values will be achievable and compatible (Tinbergen, 1970). This selective attention to a small number of system variables is justifiable only if we value certain ends more than others. Or if we think that the excluded ends will be automatically satisfied when the included ends are satisfied. Alternatively, this approach can be justified if we can assume that the priority allocation of means to achieve the included ends will not reduce the availability of means to achieve the excluded ends. If these conditions are not satisfied in fact, this selective attention to a limited set of system variables could only be sustained through romantic idealization.

Specifically, modern society has been preoccupied with maintaining an ever-increasing output and the myth that the ideal life will be attainable when economic

affluence is widely accessible to all its participants. And if economic growth brings about undesirable spillovers which threaten to compromise the promise of an ideal life, then more economic growth will surely take care of these spillovers and bring us closer to the ideal life. Sometimes, there is even an unconscious confusion between means and ends. In other words, higher output is often equated with the ideal life. This biased evaluation of the benefit of economic growth, failure to assess the compatibility between the economic end of an ever-expanding output and other non-economic ends, and confusion between means and ends are nothing but an indulgence in romantic idealization. With its unlimited faith in the creative potential of new resources and technology, romantic idealization makes it easy to ignore spill-overs from the new interaction loops designed to achieve growth as new resources and technology keep promising new and better products to achieve the ever elusive ideal life. As is well known, an easily conquerable love object is an inferior target for romantic love. So this element of elusiveness in the ideal life whets romantic love rather than discouraging it.

7. Limits to the Creative Potential of Romantic Idealization

An economy undergoing modern economic growth is an open system. But this openness is a relative one since the economy is only a sub-system of a larger system which is governed by the first law of thermodynamics. Within this larger closed system, growth of the economy must necessarily be at the expense of the rest of the system. In other words, the increased flow of resources through the economic domain in the process of growth has to be supported by the resources diverted from other sub-systems. This process of resource diversion essentially rearranges all the system variables into two categories, i.e., those that are immediately relevant to economic growth and those that are not. The values of the relevant variables are to be freely chosen with the help of the resources diverted from the irrelevant variables whose values are then to be residually determined (Fung and DeSerpa, 1978).

In general, we can assume that novelty in the combination of relevant variables is functional since their values can be freely chosen. And growth is simply a result of realizing this potential gain from creative combinations.

Creative combinations of the relevant variables are, of course, in response to some freely chosen objective functions. Through romantic idealization, these ideal objective functions are often chosen without any consideration for their compatibility with the existing objective functions associated with the irrelevant variables. But since all objective functions and variables must be compatible in a closed system, the optimization of these ideal objective functions will generate conflicting demands on the irrelevant variables. The solution set of the irrelevant variables that satisfies the new demands will not generally satisfy the old demands. With respect to the new demands, this solution set of the irrelevant variables may represent creative combinations. But it is nothing but dysfunctional adjustment with respect to the old demands. Insofar as the old demands are integrally related to the viability of the ideal objective functions[2] and therefore not completely replaceable, novel

[2] These integral relations could be governed by physical laws such as the first and second law of thermodynamics, or biogenetic and nongenetic laws (Boulding, 1978).

combinations of the irrelevant variables to satisfy the new demands will ultimately limit the freedom with which the relevant variables can be creatively combined through romantic idealization as the old demands become increasingly unfulfilled.

8. Policy Implications

We are understandably abhored by the spillovers such as environmental pollution and social discontinuity brought about by economic growth. However, attempts to deal with them are not always informed of the systemic nature of these spillovers. Insofar as some technologies generate a lower level of spillovers per unit of economic output, they should of course be preferred to alternative technology. But from the systems perspective, spillovers merely indicate that not all parts of the system have been functionally looped. And an expanding sub-system necessarily creates spillovers as new resources are introduced and old feedback loops bypassed to support its growth. The complete elimination of spillovers as loose ends would close the system and stop growth altogether.

Although many of the present environmental spillovers were truly unanticipated, it is doubtful that the technology with these spillovers would have been passed over even if the latter were correctly anticipated. The process of romantic idealization would see to it that the estimated benefit/cost ratio would appear to be favorable for its adoption. Furthermore, private investors need to consider only private costs which may be a very small part of the total costs (private and social). This implies that all our current efforts at technology assessment are doomed to failure as prior knowledge alone would not be sufficient to stifle romantic idealization. Only immediate physical constraints in the forms of resource limitation, political opposition, and/or environmental catastrophes could effectively discourage it. But in discouraging romantic idealization, we also necessarily inhibit growth.

9. Summary and Conclusion

Insofar as romantic love involves an underestimation of the chance of failure and overestimation of the chance of success and the size of the payoff, it is conducive to novel behavior. Novelty, however, is functional only in an open system characterized by uncertainty where the variables have not all been functionally looped and/or interacting at their optimal levels and systems slacks are readily available to accommodate new things. And up to a certain point, the more new things are accommodated, the easier it is to introduce further new things. This is how growth is maintained.

In a closed system where all the objective functions and variables must be compatible to achieve stability and viability, adjustments in the values of some variables through romantic idealization may be dysfunctional if they represent merely residual responses to the creative combination of the variables in the open sub-system. Since economic growth is solely concerned with a limited set of system variables, it is highly likely that setting these variables at some desired values through romantic idealization have forced and will continue to force dysfunctional residual adjustments in the rest of the system variables whose objective functions have remained unchanged or unchangeable.

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