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DO THE ECONOMIES OF SPECIALIZATION JUSTIFY THE WORK ETHICS?
AN EXAMINATION OF BUCHANAN'S HYPOTHESIS

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Abstract

Buchanan (1991, 1994) proposes an interesting hypothesis explaining the prevalence of an ethic encouraging more work. Economies of specialization mean that more division of labour may increase productivity. If everyone works more, this increases the extent of the market which enables higher degree of division of labour and hence higher productivity. Individual choice between leisure and work thus results in a sub-optimal level of work. One way to counteract this is to maintain a work ethic. This paper examines the validity and significance of this hypothesis in the Yang-Ng framework of inframarginal analysis. Buchanan's thesis probably has more relevance in ancient times when the work ethics originated but is less significant in the current world of global trade where the billions of individuals involved is sufficient to sustain specialization without artificial encouragement of additional work effort. On the contrary, the competition for relative standing, the materialistic bias caused by our accumulation instinct and advertising, and the environmental disruption of material production and consumption suggest that the discouragement of long working week may be more conducive to welfare.

Keywords: work, leisure, specialization, ethics, consumption, Buchanan.

JEL Classifications: D60, J20

1. Introduction

Buchanan (1991, 1994) proposes an interesting hypothesis explaining the prevalence of an ethic encouraging more work. The economies of specialization means that more division of labour may increase productivity. If everyone works more, this increases the extent of the market which enables higher degree of division of labour and hence higher productivity. Individual choice between leisure and work thus results in a sub-optimal level of work. One way to counteract this is to maintain a work ethic. This paper examines the validity and significance of this hypothesis.

Economists have not paid much attention to this and similar problems partly, if not mainly, because of the preoccupation with the sectoral resource allocation problem of the neoclassical economics instead of the division-of-labour problem of the classical economics. Yang & Ng (1993) attempts to shift the attention back to specialization, using formal models of optimization and equilibrium to analyze the classical problem of division of labour. It is interesting to see the significance of Buchanan's hypothesis in this new framework.

Even within the traditional framework, the problem of increasing returns has not been completely ignored. A well-known analysis is the Dixit-Stiglitz (1977) model of monopolistic competition. Within the monopolistic competition sector, each firm produces a product with decreasing average costs (a positive fixed cost plus a constant marginal cost). The rest of the economy is lumped into a composite good. To analyze the problem of work ethics, we may regard this composite good as leisure. There is nothing in the model to preclude such an interpretation. We may then directly apply the Dixit-Stiglitz result to assess the validity of Buchanan's hypothesis within such a model. Dixit and Stiglitz compare the market equilibrium (with free entry) with both the case of constrained optimum (where each firm must not make a positive loss) and that of unconstrained optimum (where lumpsum subsidies to firms are allowed). Due to the difficulties of lumpsum subsidies in the real world and to Buchanan's emphasis on realistic market economies, the case of constrained optimum is the more relevant one. Dixit and Stiglitz's 'results undermine the validity of the folklore of excess capacity, from the point of view of the unconstrained optimum as well as the constrained one. ... with a constant intrasector elasticity of substitution, the market equilibrium coincides with the constrained optimum. ... It is not possible

to have a general result concerning the relative magnitudes of [leisure]'(Dixit & Stiglitz 1977, pp.301-2). In other words, even if the unconstrained optimum is feasible, it may involve more or less leisure than the cases of the free market equilibrium and constrained optimum. This is in contrast to Buchanan's hypothesis on the presumption of over-consumption of leisure. However, this need not be a fatal blow to Buchanan who has in mind not so much the traditional economies of scale but the classical economies of specialization from the division of labour which is better modeled by the Yang-Ng framework. So, we shall mainly examine the Buchanan hypothesis on work ethics in this latter framework. To do so in an intuitively more obvious way of graphical presentation, we first discuss the consumption constraint (partly for its own interest) faced by an individual in the Yang-Ng framework in the next section, before examining the issue of work ethics in Section 3. In fact, Buchanan and Yoon (1994) provide a model with the result of over-consumption of leisure. The higher productivity of a larger market size comes from a larger supportable number of intermediate goods, which is assumed to increase productivity (the Romer assumption). In our paper here, we show the possibility without using this mechanism. The appendix examines the problem more formally, providing some support to the Buchanan thesis. However, the concluding section discusses some offsetting considerations. Briefly, Buchanan's thesis probably had more relevance in ancient times when the work ethics originated but is less significant in the current world of global trade where the billions of individuals involved is sufficient to sustain specialization without artificial encouragement of additional work effort. On the contrary, the competition for relative standing, the materialistic bias caused by our accumulation instinct and advertising, and the environmental disruption of material production and consumption suggest that the discouragement of long working week may be more welfare conducive.

2. Specialization and Consumption Constraints

In the traditional framework discussed in all economics textbooks, the consumption constraint faced by an individual/household who can buy at given prices is linear. In the case of Robinson Crusoe, it coincides with the production possibility curve which is concave (the production set is convex). In the Yang-Ng's framework, the

production set is non-convex both for the case of Robinson Crusoe and for the case of a multi-person economy. Due to the economies of specialization, the production set is as depicted in Figures 1a and 1b respectively for the cases of a single person and two persons.

In the single person case, obviously, the consumption constraint coincides with the production set. For the case of zero transactions costs with an infinite number of individuals offering unlimited trading possibilities (unlimited in the sense of eliminating the integer problem of finding a willing partner to exchange goods each specializes in, not in the sense of the absence of constraints on the price ratio), the picture is also simple and similar to the traditional case. The individual will be able to trade at the given equilibrium price ratio and hence face a linear consumption constraint. For the case of individuals with similar production abilities/functions, they all have the same production set and hence the equilibrium price-ratio is determined by the (absolute) slope of the line y_1x_1 in Figure 2, since a different price-ratio will be unable to induce any individual to produce one of the goods. Neither the similarity in preferences between individuals nor the symmetry in preferences between the goods is needed for this result. For simplicity and without loss of generality, normalize the units of the goods such that the value of each good that can be produced by one person is equal. (In Figure 1a and Figure 2, $x_1 = y_1$.) At the equilibrium price-ratio of the line in Figure 2, if the aggregate amount of good X demanded relative to that of good Y is a/b , $[a/(a+b)]\%$ of people produce good X and $[b/(a+b)]\%$ produce good Y. Each individual just chooses a point on the line to reach her highest indifference curve as in the textbook. Her production point is either at x_1 or y_1 depending on whether she produces X or Y. We have here the complete division of labour (each person produces no more than one good) with free exchange unfettered by the integer problem due to a large number of individuals relative to the number of goods.

The introduction of transactions costs makes the consumption constraint different from the line x_1y_1 . For simplicity, consider the case of a proportional transactions cost (i.e. the ice-block effect, with a constant percentage of the good bought from the market melted before consumption; as a larger block of ice will have a smaller percentage melted, the ice-block is not a perfect example of this case of proportional transactions costs). If the transactions costs are small relative to the

degree of economies of specialization such that it is always more efficient to specialize in the production of one good, the situation is as depicted in Part a of Figure 2 where the consumption constraint becomes x_1Py_1 . If the highest indifference curve is reached along the segment x_1P , the individual produces at x_1 and exchange up from x_1 along x_1S , but with the proportionate transaction's cost reducing the consumption point to the segment x_1P . (With transactions costs, it is not efficient for a producer of X to exchange beyond this point S; if an individual prefers to consume more of good Y than the point P, she should produce y instead of x, and *vice versa* for the producer of Y with respect to the point R.) On the other hand, if the transactions cost is large relative to the degree of economies of specialization, the consumption possibility set is Ox_1AEFBy_1 in part b of Figure 2. The individual may produce at either x_1 or y_1 ; other points on his PPC are inefficient except possibly the segment EF. The cases of fixed transactions costs, combined transactions costs, etc. may be similarly analyzed.

For the case where the number of individuals are not large relative to the number of goods, the situation is quite different and much more complicated. As a simple example, consider the case of two individuals (Arthur and Betty) with two goods (X and Y). Assuming similar production possibilities, their aggregate production set is as depicted in Figure 1b. But what is the consumption constraint of each? First, each individual always has the autarky alternative to fall back on. Hence, the consumption possibility set cannot be smaller than the production set of autarky (i.e. the shaded area Ox_1y_1 in Figure 1a). It is well known that, in the case of bilateral bargaining situation, the outcome is indeterminate and depends on the bargaining skills of the persons involved. So, let us abstract away this aspect of the problem by assuming that the two persons are similar in bargaining skills (or both insist on some form of fairness) or by assuming a Nash bargaining outcome. The two individuals will reach an outcome that is sort of equally advantageous to both (hence, effectively also eliminating the possibility of a stalemate). The situation remains complicated.

If we further assume that the two individuals have identical preferences and that transactions costs are zero, the consumption possibility set faced by each person is Ox_1Qy_1 i.e. the aggregate production set divided by two, as shown in Figure 3. For example, the point P on the consumption constraint is reached with one person producing at x_1 and the other producing at P'' , reaching the aggregate production point

P' whose equal division gives the point P . Alternatively viewed, the person producing at x_1 exchange Tx_1 amount of X for PT amount of Y . (Hence, we may note that, unlike the case of many individuals, here the equilibrium exchange ratio is dependent on preferences, even under the assumption of similar preferences and equal bargaining skills. In Yang & Ng 1993, the simplifying assumption of symmetry in preferences between goods ensures that point Q instead of any other point in the consumption constraint is selected.)

Note that points on the line x_1Qy_1 , except the three points x_1 , Q , and y_1 , that are feasible in the case of Figure 2 (with many individuals and with zero transactions costs) are no longer feasible in this case of Figure 3 (with only two individuals and identical preferences) and hence not drawn. For example, if Arthur prefers a point like R to Q and wants to produce at x_1 and exchanges up x_1Q to reach R , this is possible only if Betty produces at y_1 and exchanges to reach S . However, with the usual convexity of preferences, if R is preferred to Q , Q is preferred to S and hence, *a fortiori*, R is preferred to S . With our assumption of equal bargaining skill and similar preferences, Betty will not agree to settle at S , with Arthur reaching a much superior position R . Of course, if S is still superior to all point in the autarky production set and if Arthur is better in bargaining than Betty, then R may be feasible. This illustrates the dependence of the feasible consumption set on bargaining. And of course, the introduction of transactions costs further complicates the identification of the consumption set, as we discussed for the case of many individuals illustrated in Figure 2. However, instead of discussing this complication, we move to the introduction of leisure.

For simplicity, Yang & Ng (1993) does not consider leisure as a variable. In the new classical framework, leisure has been considered by Lio (1996). In our graphical approach here, leisure necessitates an additional axis as illustrated in Figure 4 for the case of an infinite number of individuals with no transactions costs. The introduction of leisure allows the question of work ethics to be analyzed, as done in the next section.

3. Does the economy of specialization make work ethics welfare-improving?

It may first be noted that, in the case of an infinite number of individuals and in the absence of ignorance, irrationality, tax distortion, and external effects (on which see below), the artificial encouragement of work ethics cannot increase, but will likely decrease, welfare, ignoring possibly some freak second-best and/or distributional effects. In this case, the advantage of specialization can be fully realized without artificial encouragement of work ethics (in the absence of significant transactions costs whose presence complicates the graphical illustration without affecting the conclusion). Each individual reaches her highest indifference surface by her rational choice depending on her true preference between leisure and goods. In Figure 4, suppose point A touches the highest indifference surface and the individual chooses to have OL amount of leisure. The artificial encouragement (including through work ethics) to work more may make the individual choose a point like B and a smaller amount of leisure OL'. However, evaluated at her undistorted preference, she is better off at A than at B. This is so despite the fact that her labour productivity is higher at B (with the production point at either x'_1 or y'_1) than at A (with the production point at either x_1 or y_1) due to the economies of specialization. True, 10% more work may produce 15% more product. However, if the individual prefers the consumption point A to B, it is better to have lower productivity and more leisure. Thus, the study by Luo 1996 which addresses the question of productivity but not the question of preference or welfare, while yielding some interesting results, does not answer the question regarding the desirability of encouraging work.

On the other hand, in the case of a small number of individuals, it is not difficult to construct examples to show that a decrease in the preference for leisure (higher level of work ethics) by an individual may benefit others through more opportunities for trade and specialization. This effect is similar to the network externality. However, this extra-trade effect is present even in the absence of the economies of specialization. This is illustrated in Figure 5 for the simple case of two individuals with exogenous comparative and absolute advantage, constant returns to scale, linear transformation curve (between good X and good Y; i.e. constant marginal rate of transformation, but a diminishing MRT may also be allowed) and absence of

transactions costs. Arthur has a comparative advantage in producing X; spending PR amount of time working, his production possibility curve for the two goods is indicated by the line x_1y_1' , in contrast to that of x_2y_2' for Betty. Arthur would like to sell X for Y if the price of X in terms of Y is larger than 1/2. However, if Betty prefers to have 24 hours of leisure a day, choosing the corner solution at P even if she is offered 2 units of X for each unit of Y, Arthur is stuck with his production possibility set. On the other hand, if a higher level of work ethics makes Betty willing to spend PQ amount of time working to produce at y_2 and exchange (drawn as one to one, but could be more favourable) to reach the point A, this will allow Arthur to reach B which may be preferable to all points on his production set. Thus, Arthur is made better off by Betty's higher level of work ethics due to the increased opportunity for exchange. While goods are tradable, leisure is not. (The possibility of joint usage of leisure and/or the externality in leisure is not considered here.) Betty's preference for the corner solution at P may be regarded as rather extreme. However, even at less extreme choice, Betty's strong preference for leisure may still leaves Arthur with little opportunity to trade, such as being able to move up from x_1' only a very small distance, instead of to point B or beyond. That the opportunity for trade of an individual is increased by the lower preference for leisure is shown more formally in the appendix which allows for different degrees of economies of specialization and shows that the higher the degree of economies of specialization, the larger is the beneficial effect of a higher work ethics on the trading partner.

However, the gain of Arthur from the higher work ethics of Betty is at the expense of the latter. In terms of her intrinsic preference (her preference unaffected by the work ethics), Betty must be worst off at the point A. (Rationality and the absence of ignorance are assumed here. For relaxation of these, see the next section.) Otherwise, Betty could be persuaded by Arthur to produce at y_2 and trade to and consume at A, even without the artificial work ethics

It may be noted that the case for the work ethics on the ground of economies of specialization should be based on the evaluation in accordance with the original preferences. For example, the case for taxing pollution is justified on the ground that individuals will be better off with the tax according to the given preferences, though each individual on her own prefers to pollute. If the case for the work ethics were

based on some irrationality of preferences, then the evaluation might be made with respect to certain more rational preferences if such could be justified. Since the case is not based on some problem with the original preferences but purely on the economies of specialization, one must be able to show that, due to the working of these economies, some artificially higher level of work ethics may yet lead to a superior situation even according to the original preferences. If one could base the case on the new preferences, one could argue for changing the preference for x over y into y over x for any x and y at all. However, it is true that, since economic analysis is based on a given set of preferences, when preferences change, especially if exogenously, economists have really no widely accepted criteria to judge desirability. Nevertheless, I have argued elsewhere (Ng 2000) that happiness should then be used as a valid cross-preference criterion since happiness is our ultimate objective and that remains unchanged as preferences change. However, the case for the work ethics does not pretend to be based on a higher happiness level even if the resulting situation is lower in terms of the original preference. Thus, we need not be concerned with this issue here.

A question arises: Does Arthur gain more than marginally at only a marginal loss to Betty? If so, the artificial encouragement of the work ethics may still be desirable from a social point of view. The answer is negative. At the exchange ratio of one-to-one illustrated in Figure 5, it is true that the gain to Arthur may be larger than marginal even only for a small amount of exchange undertaken. It is also possible for the loss in intrinsic preference to Betty to be only marginal. However, if this is the case, Arthur should be able to persuade Betty to undertake some production plus some exchange at a more favourable ratio to Betty such that the whole change is Pareto optimal according to the intrinsic preferences of both individuals. The fact that this is not possible and an artificial work ethics is needed means that, if the change is more than marginally beneficial to Arthur, it must also be more than marginally detrimental to Betty according to the intrinsic preferences.

While the economy of specialization is not necessary to make work ethics possibly welfare-improving for others due to higher trading opportunity, it should increase this welfare-improving effect as it increases the gain from specialization and trade. In this sense, the Buchanan thesis on work ethics has some validity. However,

its quantitative significance is unlikely to be large. This is so since there are millions of individuals in the real world and the costs of long distance trade are decreasing due to improved transportation and communication. Hence, in the real world, we are more characterized by the case of Figure 4 than by that of Figure 5, or the generalization of Figure 5 to cover the presence of economies of specialization.

While the network or trading externality may exist for the case of a small number of individuals (in either the presence or absence of the economy of specialization, as shown above), it need not always exist even for the case of just two individuals. This is shown in Figure 6 for the case of two identical (in productivity, preference, and bargaining skills) individuals with the presence of economies of specialization. (Figure 6 is the extension of the case of Figure 3 to include leisure as a variable.) Suppose that the consumption feasibility set (only shown partially in Figure 6) touches the highest indifference surface (in accordance to the intrinsic preference) at A. The artificial encouragement of work ethics shifts the solution to B. Similar to the case of Figure 4, this shift is again a deterioration according to the intrinsic preference. The expanded extent of the market does not help in this case (Figure 6) as the economy of specialization has already been fully utilized at the original point A where each individual specializes in the production of only one good. Even if there are more goods than individuals such that each individual has to produce more than one good, a higher degree of specialization can be better facilitated by a larger number of individuals than by a longer working week. Moreover, the globalization of the economy means that we have billions of individuals, a number well in excess of the number of goods.

4. Concluding Remarks

From the discussion above and that of the appendix, it may be concluded that, while the Buchanan idea of the beneficial effect of work ethics through its facilitation of division of labour to benefit from the economies of specialization has some validity, its significance is small in the present world of global trade at relatively small transportation and other transactions costs. Nevertheless, in ancient times when the work ethics originated, the Buchanan thesis might have had more relevance. Before the development of modern mass transportation and convenient communications,

most of the trade typically was confined to relatively small geographical areas with small population sizes. The opportunity for trade would thus be significantly increased through a higher work ethics. The gain from a higher degree of specialization may thus offset the loss of artificial encouragement of work. Of course, the work ethics might also have been fostered by factors unrelated to this paper. For example, the presence of a small proportion of people too lazy to work and preyed or relied on others might have caused sufficient external costs to generate forces promoting the work ethics.

In the contemporary world, while such factors such as laziness may still be as important, there are offsetting considerations which may tilt the balance the other way round. Particularly, three factors may be mentioned here. First, beyond the biological levels of survival and comfort, higher consumption has largely relative than absolute significance. This has been emphasized by economists from Rae (1834) and Veblen (1929) to Akerlof (1976), Ireland (1998), and Frank (1999), among others. Recent studies reveal the magnitude, scope, and relative (to absolute income) importance of relative standing that are beyond the imagination of most people, ourselves included. For example, one may expect that the importance of relative standing is least in the area of health care where the absolute effects may be expected to dominate. However, Wilkinson (1997) shows that even in health care, relative standing is more important than absolute standards. The relatively poor, even with higher absolute incomes and health care, ended up with much lower level of healthiness than the absolutely poor but relatively well-off. Mortality is more a function of relative than absolute income and health care. The competition in relative terms, especially in income and consumption, leads to excessive amount of work from the social point of view. This at least partly explains why we need limitations on working hours rather than encouraging more work.

Secondly, in addition to the relative-income effect, our accumulation instinct and the omnipresent advertising in our commercial world cause a materialistic bias, making individuals placing more emphasis on making money than warranted by its real contribution to welfare, even from the individual point of view, as argued in Ng (2000). Thirdly, the production and consumption of most goods and services, directly and indirectly (through input usage, for example), causes significant degree of

environmental disruption. The largely global public-good nature and very long-term nature of most environmental protection measures also cause them to be underprovided by national governments with relatively short time horizons. Income-earning work is related to production and consumption and leisure as such is less environmentally disruptive. (Tourist activities that are environmentally disruptive are more money-intensive than leisure-intensive.) Thus, the consideration of environmental protection also points to the discouragement rather than the encouragement of work.

Appendix

In this appendix, we use a simple model of the Yang-Ng framework allowing the inframarginal comparison of different corner solutions of organizational choice (such as autarky vs. division of labour) to examine the role of different degrees of preference for leisure.

For simplicity, non-labour inputs are ignored. Each individual has T units of time which may be used for leisure or the production of either or both of the only two goods X and Y . Thus, each individual is faced with the time constraint

$$(1) \quad T = l + l_x + l_y$$

Where l = leisure time, l_x and l_y are time used in the production of X and Y respectively. The production functions are

$$(2) \quad X = l_x^a; \quad Y = l_y^a$$

where $a > 1$ would indicate the presence of economies of specialization. Individuals are taken as ex-anti identical and production functions are symmetrical to emphasize the point that gain from trade may arise from the economies of specialization alone.

A Cobb-Douglas utility function is used for simplicity. Since we are considering a change in preference only for leisure, we let only leisure to carry a preference variable. Those for x and y (using lower case to indicate the amount consumed) may be normalized to unity by scaling the utility function since no asymmetrical preference between the two goods has to be introduced.

$$(3) \quad U = xyl^\alpha$$

Consider first the case of autarky where the individual self-produces both goods. The utility function may then be written as

$$(4) \quad U = (T - l - l_y)^a l_y^a l^\alpha$$

The maximization of (4) with respect to the choice of l_y gives the solution

$$(5) \quad \begin{aligned} l_x &= l_y = aT/(2a + \alpha), \\ l &= \alpha T/(2a + \alpha), \\ U &= a^{2a} \alpha^\alpha [T/(2a + \alpha)]^{2a + \alpha}, \end{aligned}$$

Now consider the case of specialization where an individual produces only one of the goods and exchange with another individual who produces the other good. Due to symmetry, we need only to consider the case where the individual produces X .

From his output of X, he supply x^s in exchange for y at a price of p (price of X in terms of Y). However, market transactions is supposed to incur a transactions cost of $1 - k$. Thus, while the amount of Y he bought is equal to px^s , the amount he actually consumes equals only kpx^s . His utility function may thus be written as

$$(6) \quad U = [(T-l)^a - x^s] kpx^s l^\alpha$$

The maximization of (6) with respect to l and x^s gives the following solution

$$(7) \quad \begin{aligned} l &= \alpha T / (2a + \alpha), \\ x &= x^s = [2aT / (2a + \alpha)]^a / 2, \\ y &= kp [2aT / (2a + \alpha)]^a / 2, \\ U &= 2^{2a} kp a^{2a} \alpha^\alpha [T / (2a + \alpha)]^{2a + \alpha} / 4 \end{aligned}$$

From (6) and (7), we have

$$(7) \quad U^D / U^A = 2^{2a} kp / 4 = 2^{2(a-1)} k$$

Where the superscripts D and A stand for division of labour and autarky respectively. In this symmetrical model, for the case of either a large number of individuals (or price-taking behaviour), two individuals with equal bargaining ability, or with the Nash bargaining outcome, we have $p = 1$. Then, division of labour yields a higher utility if and only if $2^{2(a-1)} k > 1$, i.e. if the economies of specialization (measured by $a-1$) is sufficiently large to offset the effect of transactions costs (measured by $1-k$). For example, if $a = 1.1$, k has to be no smaller than 0.87055 for division of labour to dominate autarky in this simple model. It may be noted that, in this model, the relative superiority of division of labour vs. autarky does not depend on the preference for leisure. However, if division of labour is chosen, then the willingness to trade decreases with higher preference for leisure; x^s is a decreasing function of α . Thus, to the extent that other people may benefit from one's willingness to trade, a higher degree of work ethics (reduced preference for leisure) may be regarded as favourable. This may be shown more formally by bringing in the other person who produces Y into the picture. His situation is exactly the same as the person producing X depicted above, except that his preference parameter for leisure is indicated by β . Then his supply y^s is the same as the second equation in (7) for x^s except that α is replaced by β . Then, from the market equilibrium requirement $px^s = y^s$ (since the price of Y in terms of X is the inverse of the price of X in terms of Y), we may solve for the equilibrium price of X in terms of Y as

$$(9) \quad p = [(2a + \alpha)/(2a + \beta)]^a$$

which clearly increases with α and decreases with β . Thus, the person producing X benefits from the higher work ethics of the person producing Y and vice versa.

Now, let us examine the effect of a higher degree of the economies of specialization (a larger a) on the benefits of the higher work ethics of others. To concentrate on the increase in work effort rather than the complication of an initial interpersonal difference in preferences for leisure, we evaluate the effect of an increase in a on the effect of a change in α (or β , the two are symmetrical) on p at an initial position when $\alpha = \beta$. (It may be noted that it is more convenient to examine the effect on others through the exchange ratio rather than on utility itself. The effect of a simultaneous change in both α and β on utility is dependent on the normalization with respect to α , β , and T . This is related to the non-arbitrariness in the choice of units discussed in Ng & Wang 1995. Moreover, with a change in preference, it also raises the question of using which preference pattern to make welfare assessment.) We then have,

$$(10) \quad \frac{\partial^2 p}{\partial \alpha \partial a} = \left[\frac{2a + \alpha}{2a + \beta} \right]^{a-1} + \frac{a}{a-1} > 0$$

This means that, the higher the degree of economies of specialization, the larger is the beneficial effect of a higher work ethics on the trading partner. Thus, to this extent at least, Buchanan's conjecture has validity and is related to the economies of specialization.

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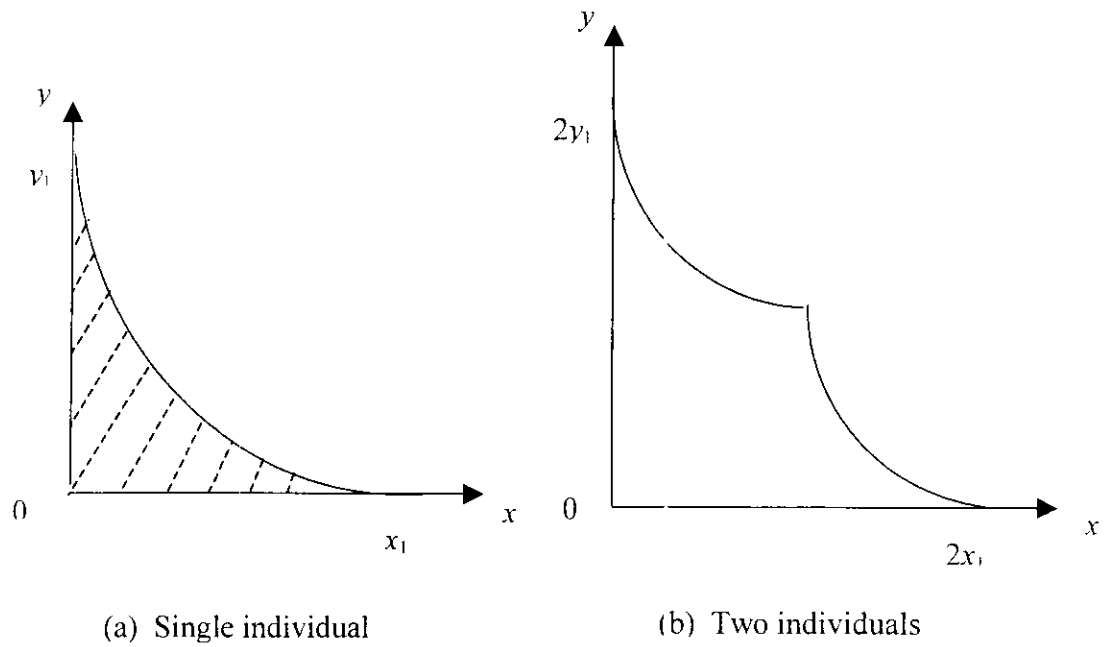
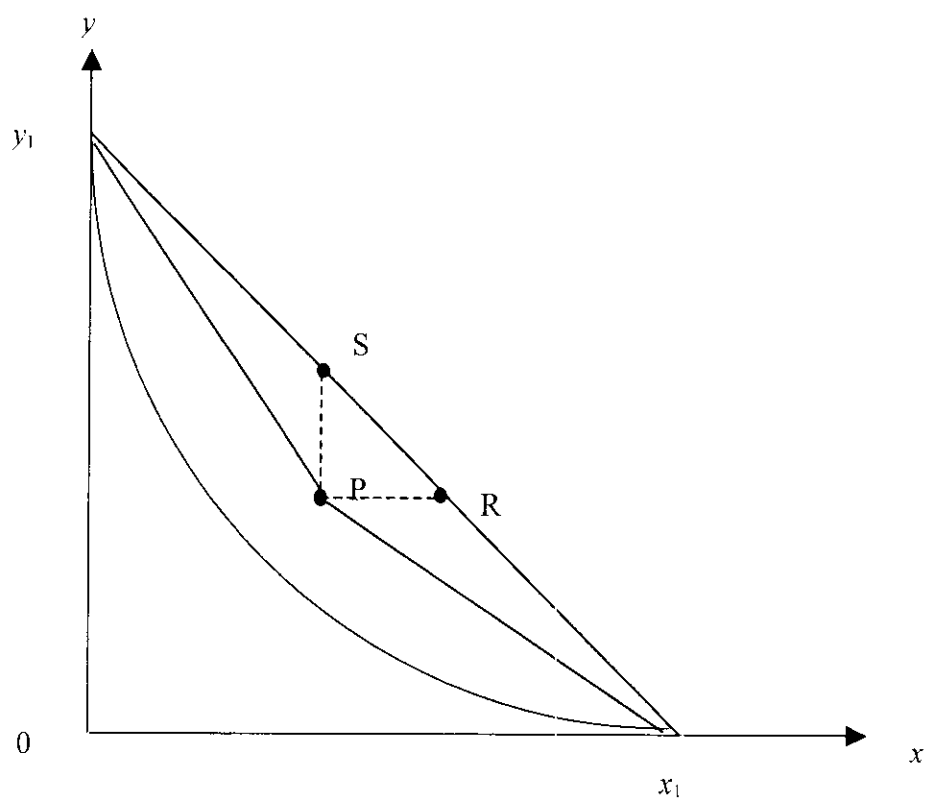
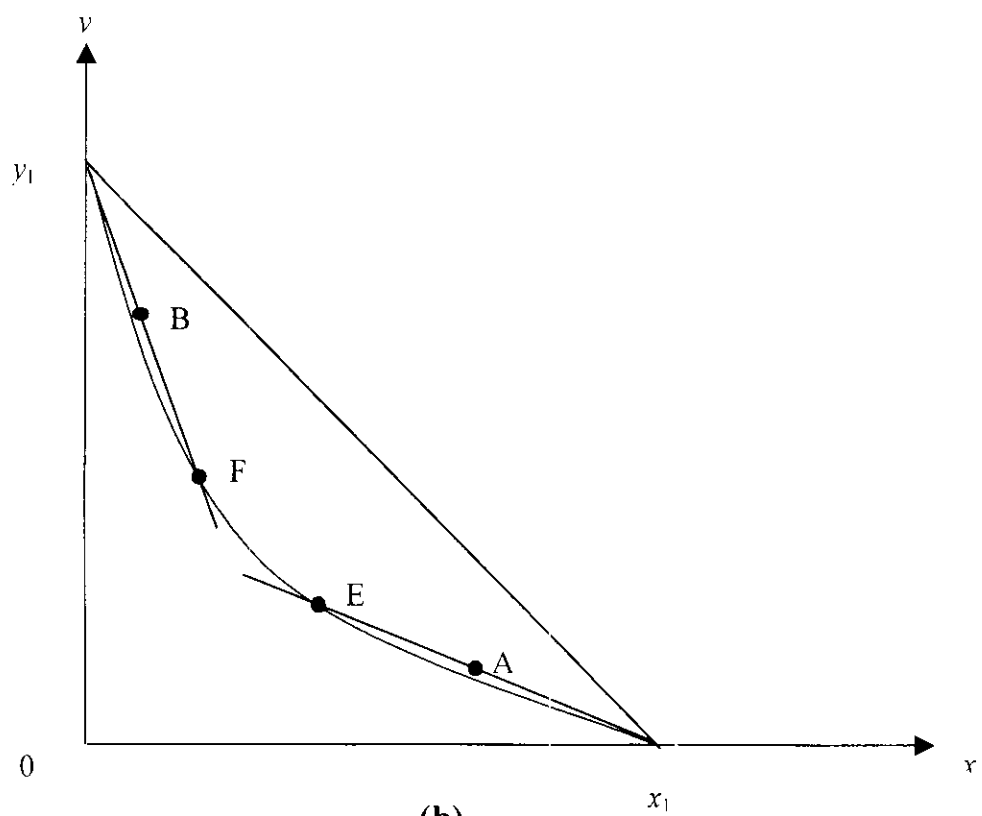


Figure 1: Production Possibility



(a)



(b)

Figure 2: Consumption Possibility – Many Individuals

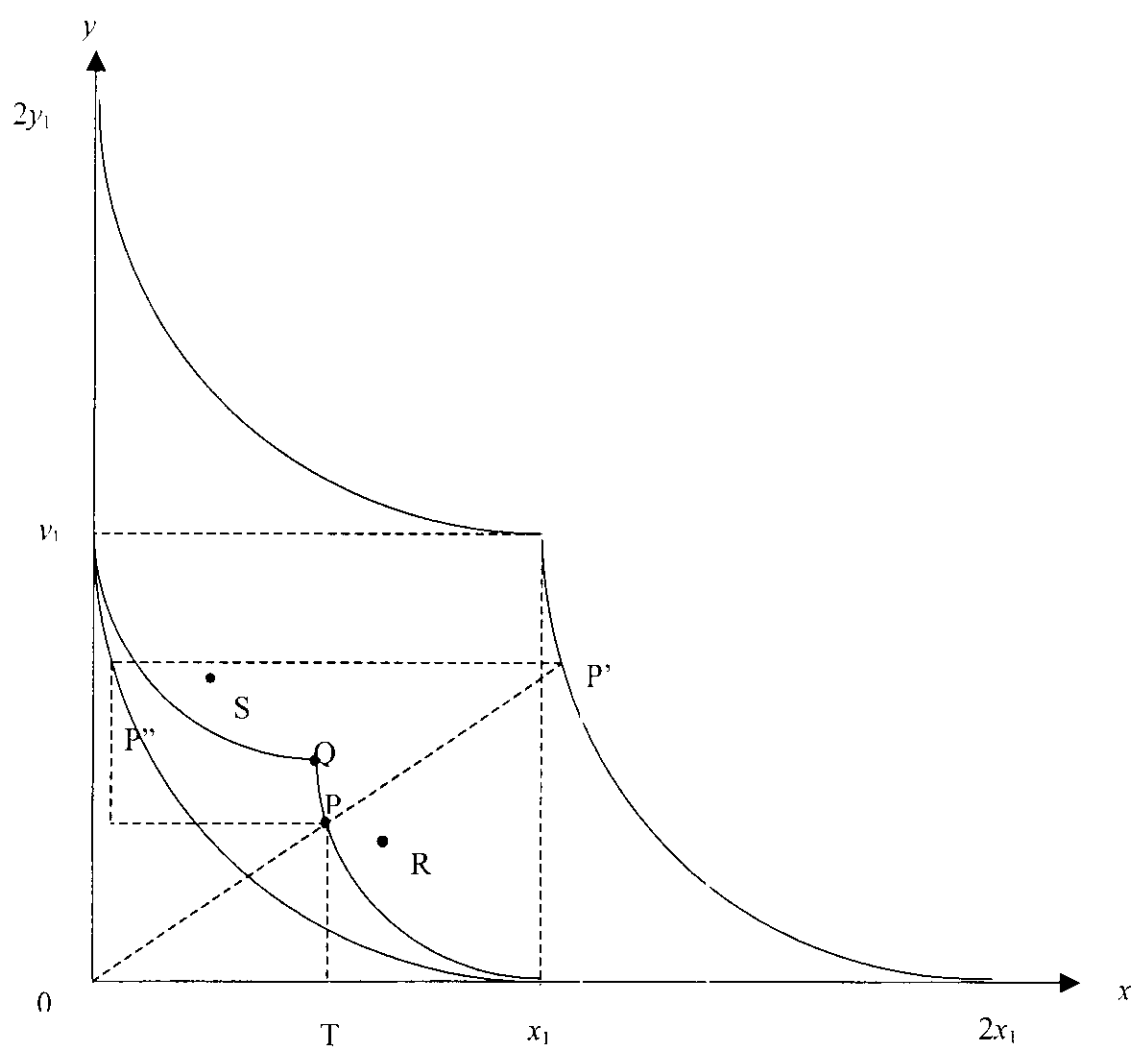


Figure 3: Consumption Possibility – Two Individuals

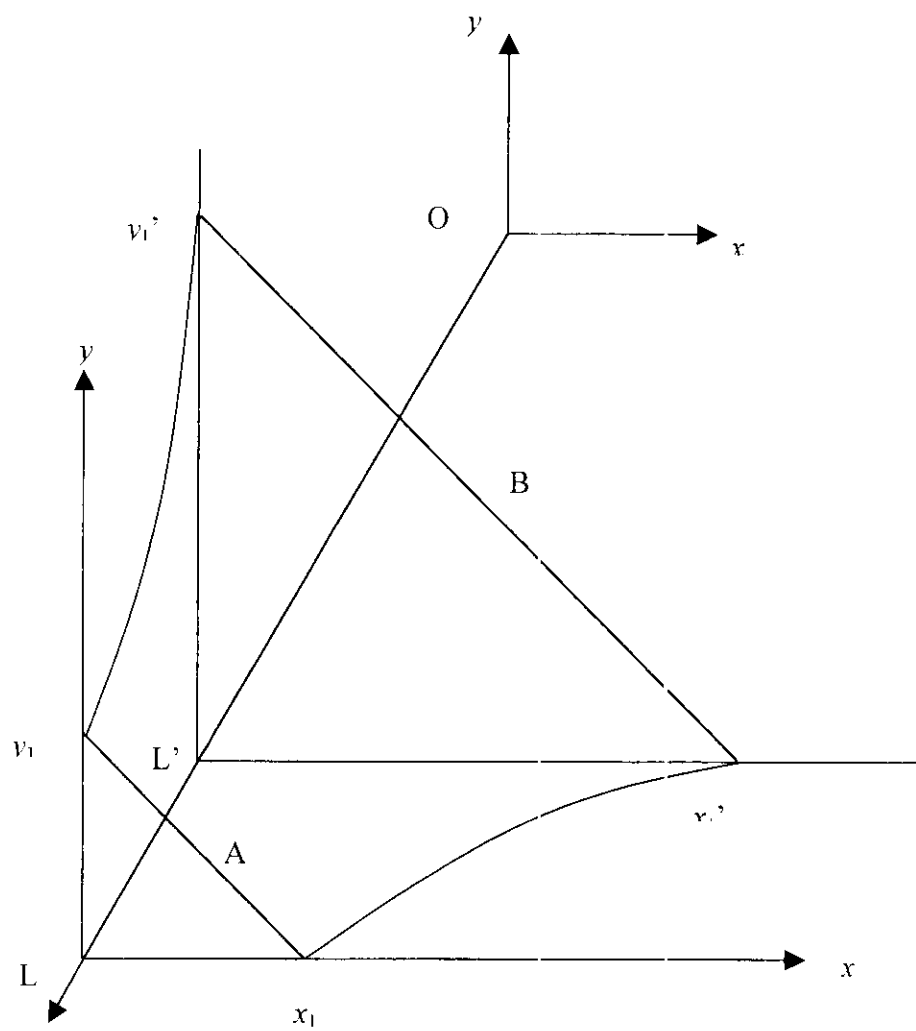


Figure 4: Leisure Choice – Many Individuals

Figure 5: Trade Opportunity

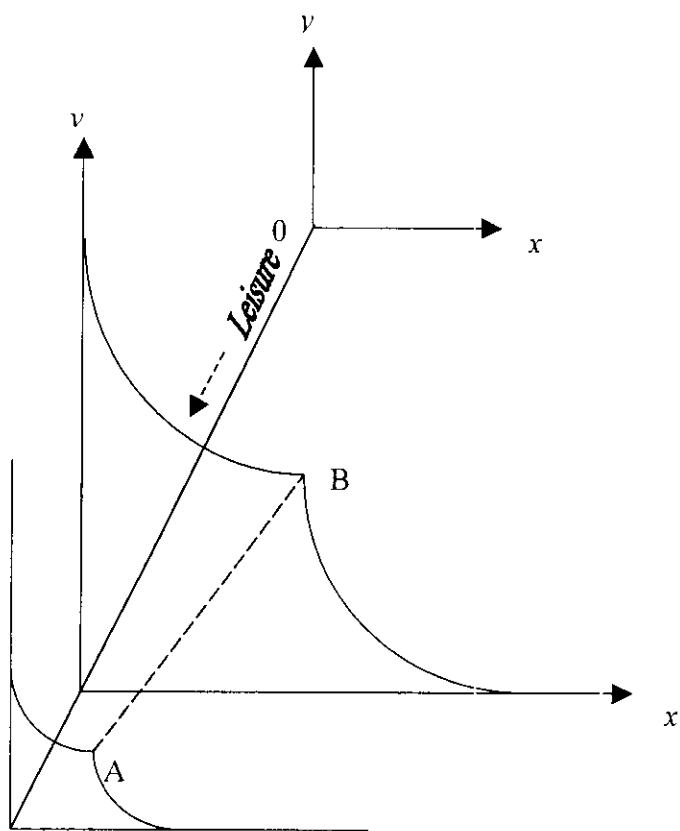


Figure 6: Leisure Choice – Two Individuals

THE EAST-ASIAN HAPPINESS GAP: SPECULATING ON CAUSES AND IMPLICATIONS*

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Abstract

Despite spectacular economic growth, most East Asian countries (especially those with the Confucian cultures) score very low in happiness surveys. This paper speculates on the reasons for this East-Asian happiness gap, including environmental disruption, excessive competitiveness, repressive education, excessive conformity, negative attitudes towards enjoyment, and the emphasis on outward appearance. Implications on the desired direction of future growth especially regarding the relative importance of public spending on the environment and research and the non-material aspects of life are also briefly touched on.

Keywords: Asia, environment, growth, happiness, public spending, quality-of-life.

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1. Introduction:

Asia, especially East Asia, has been growing rapidly despite the financial storm over 1997-98. I confidently said then that the RMB had no reason to depreciate and that East Asia will resume its rapid growth soon. (Keynote speeches at Conferences at Open University of Hong Kong, January 1998 and at University of Macau, March 1998.) I continue to hold such optimistic views. I also continue to believe that the Aussie, the Chinese, and the Malaysian dollars will all appreciate against the US dollar in terms of real exchange rates (nominal adjusted for differentials in inflation rates) in the medium to long terms, without ruling out short-term fluctuations. (I said that in 1993 regarding the RMB, which has appreciated much in real terms since. However, I did not make any money.) These predictions are based mainly on the relative purchasing power parity comparisons and the future growth prospects. The East-Asian countries/regions referred to here includes Mainland China, Hong Kong, Taiwan, Korea, Japan, and Singapore. To some extent, it probably also applies to Malaysia and Vietnam, but not much to the Philippines (which has high happiness score), Thailand, and Indonesia (which is still beset with economic difficulties).

While East Asia (with the major exception of Japan in the last decade and the temporary slip around 1998 for the crisis-affected countries) has done extremely well economically, it has not done well at all in terms of the ultimate objective of life – happiness. In fact, a recent international comparison (Cummins 1998) puts East Asians as the very lowest group of countries. This should make us pause to reflect on some fundamental issues like the ultimate ends, the worth, and the costs of economic growth; the reasons for the relative failure of the East Asians in achieving happiness despite their economic success; the implications on ways to increase happiness and for public policies. Due to the unevenness of the level of economic progress, this paper is more relevant for the more developed parts of East Asia. (On the precise meaning of happiness, the argument that it is the appropriate ultimate objective, and related issues, see Ng 2000b.)

With the rapid growth in East Asia, researchers have discussed the effects of Confucianism on economic growth. However, the East-Asian happiness gap and its possible relation to the Confucian cultures have been largely neglected. I am quite aware that this is a sensitive area. I also do not have enough expertise in the area to give a scholarly discussion. However, since happiness is the most important and the ultimate objective in life, it is important to discuss this in the open so that perhaps suitable

remedies may be forthcoming if more people become interested.

This paper may have touched on some sensitive issues. However, I am myself an East-Asian by birth, education, and culture. Thus, I hope that the paper will be taken as a self-examination aiming at improvement rather than as a criticism by an outsider.

2. The Failure of High Incomes to Increase Happiness and the East-Asian Happiness Gap

Happiness is difficult to measure and compare interpersonally. Many economists are skeptical of the reliability of the measures of happiness which are largely based on self assessment. However, since happiness is the ultimate objective of life, it is extremely important. It is better to know roughly about something important than to have precise measurement of something irrelevant. (The square roots of the last 4 digits of people's bank account numbers can be precisely measured and compared but are meaningless.) Happiness is cardinally measurable, at least conceptually (Ng 1997). A practical method has also been developed and used to measure happiness cardinally and interpersonally comparably (Ng 1996). Though most existing measures of happiness have some problems with their comparability, they are not completely useless. Different researchers come up with largely consistent results (Fordyce 1988), which also correlate well with the frequency of smiling (Pavot 1991), with the reports of friends and family members (Diener 1984), with recalls of positive versus negative life events (Seidlitz, Wyer & Diener 1997), with physical measures like heart rate and blood pressure measures (Shedler, Mayman & Manis 1993), and with EEG measures of prefrontal brain activity (Sutton & Davidson 1997). If one wants to be pedantic in insisting on perfect accuracy, even the measurement of GDP is open to query on its accuracy and comparability.

Studies by psychologists, sociologists, and a small but increasing number of economists show that, both within a country and across nations, the happiness level of people increases with the income level, but only slightly. For example, using regional and cultural classifications, the Northern European countries with high incomes score top on happiness, followed by the group of English-speaking US, UK, Australia, and Ireland. Central and South-American countries including Brazil come next, followed by the Middle East, the Central European, Southern and Eastern European (Greece, Russia, Turkey, and Yugoslavia), the Indian Sub-continent, and Africa which does not, however, come last. Southern and Western European (France, Italy, and Spain) score

significantly lower than Africa. And the last group is East Asia (including Japan, the country that leads in income, Korea and China). Singapore has an income (per capita) level 82.4 times that of India. Even in terms of purchasing power parity instead of using exchange rate, Singapore is still 16.4 time higher than India in income. However, the happiness scores of both countries are the same, both significantly higher than that of Japan. (See Cummins 1998. Cf. Diener & Suh 1999; Inglehart *et al.* 1998, Table V18. The frustration from high expectation from the transition makes many former Soviet countries having very low happiness scores in the last few years.)

The low ranking of East Asian countries in happiness is consistent with some other measures. For example, according to the survey of 18 thousand adults in 27 countries and regions by Durex reported in the mass media world-wide on 17-18 October 2000, Japan also has the lowest average number of sex over a year, 37, far behind the second lowest (Malaysia) of 62 and the low figures for other East-Asian regions (China 69, Taiwan 78, Hong Kong 84). In comparison, the overall average of 96 is exceeded by, among others, India (95), Brazil (113) and U.S. (132, the top figure). (Document available at <http://library.northernlight.com/EB20001017290000041.html>.) For another example, according to a measure of life satisfaction, East-Asian regions score rather low (China 4.00, Korea 4.98, Hong Kong 5.07, Japan 5.14, Singapore 5.72) in comparison to countries of lower per-capita incomes (Nigeria 5.11, India 5.15, Pakistan 5.49, Peru 5.77, Egypt 6.14, Colombia 6.20, Australia 6.23). (See Diener & Suh 1999, p.444.) The study of Furnham and Cheng (1999) also shows that Japan and Hong Kong score significantly lower in happiness than Britain.

Taken together, the evidence suggests that income matters more for happiness at very low levels of income but it still accounts for less than 2% of the overall variance in individual happiness (Diener *et al.* 1993). The positive relationship vanishes intertemporally within the same country (at least for the advanced countries which have such data). For example, from the 1940's to 1998, the real income per capita of the US nearly trebled. However, the percentage of people who regard themselves as very happy fluctuated around 30%, without showing an upward trend; another measure of average happiness fluctuated around 72%. Over the period 1958-88, the per-capita real income level in Japan increased by more than five times. However, its average happiness measure fluctuated around 59%, also without an upward trend (Diener & Suh 1997; Myers 1996; Frank 1999; Blanchflower & Oswald 2000; Veenhoven 1993). In fact, 'if there is any causal relationship in rich countries, it appears to run from

happiness to growth, not vice-versa' (Kenny 1999, p. 19). Happier persons may be more able to get and keep well-paying jobs, conference organizers may be more willing to invite jolly keynote speakers and pay them more.

Recent research suggests that individuals who strongly value extrinsic goals (e.g. fame, wealth, image) relative to intrinsic goals (e.g. personal development, relatedness, community) have less happiness (Ryan, *et al*, 1999). 'Materialism, a preoccupation with economic well-being, is negatively correlated with SWB [subjective well-being], and especially so in those that believe that more money would make one happier' (Offer 2000, p.20, reviewing Ahuvia & Friedman 1998, p.154, 161).

Kenny (1999, pp. 4-5) also puts the point of fast diminishing marginal utility of income in more objective terms thus: '*Compare Mozambique, China and the USA. In turn, the countries' GNPs per capita in 1992 were \$80, \$470 and \$24,740. Infant mortalities were 145.6, 30.5 and 8.6 per 1,000 live births, respectively. Life expectancies were 47, 69 and 76 years. Thus, going 1.6 percent of the distance between Mozambique and the United States in terms of wealth, so reaching China's income, we move 84 percent of the distance in terms of infant mortality and 76 percent of the distance in terms of life expectancy.*'

On the other hand, there are factors that affect or at least correlate with happiness much more significantly than income, including being married or single (Myers 1996, p. 510), being employed or not (Winkelmann & Winkelmann 1998), and having a religious belief and church attendance. (See Veenhoven 1984 and Kahneman *et al*. 1999 for factors associated with happiness.)

Furthermore, the picture is not much different even if we use more objective indicators of the quality of life. Analyzing a panel data set of 95 quality-of-life indicators (covering education, health, transport, inequality, pollution, democracy, political stability) covering 1960-1990, Easterly (1999) reaches some remarkable results.

While virtually all of these indicators show quality of life across nations to be positively associated with per capita income, when country effects are removed using either fixed effects or an estimator in first differences, the effects of economic growth on the quality of life are uneven and often nonexistent. It is found that '*quality of life is about equally likely to improve or worsen with rising income ... In the sample of 69 indicators available for the First Differences indicator 62 percent of the indicators had time shifts improve the indicator more than growth did*' (Easterly 1999, p. 17-8). Even for the only

20 out of the 81 indicators with a significantly positive relationship with income under fixed effects, time improved 10 out of these 20 indicators more than income did.

The surprising results are not due to the worsening income distribution (there is some evidence that the share of the poor gets better with growth). Rather, the quality of life of any country depends less on its own economic growth or income level but more on the scientific, technological, and other breakthroughs at the world level. These depend more on public spending than private consumption. Many studies (e.g. Estes 1988, Slotje 1991; see Offer 2000 for a review) show that measures of social progress strongly correlates with income level at low incomes (to around US\$3,000 at 1981 prices) but the correlation disappears after that. Others (e.g. Veenhoven 1991, Diener & Suh 1999) show a similar relationship between happiness and income.

3. Some Reflections

I do not profess to have the complete explanation and answers. However, since I believe that, ultimately, happiness is the most, if not the only, important thing, I wish to venture some reflections. Incomplete and immature as they may be, these bricks may still serve to attract jades.

3.1 Why still the rat-race for money?

If happiness is the ultimate objective and more incomes no longer increase happiness, why do people still engage in the rat race for making more and more money? This may be explained by: the environmental disruption effects, relative-income/consumption effects (emphasized by Easterlin 1974), the inadequate recognition of adaptation effects, and the irrational materialistic bias. To some extent, it is individually rational to make more money, as higher incomes still contribute marginally to happiness through the importance of relative standing. At the social level, the relative-income effects between individuals cancel each other to leave no effect overall. In addition, the environmental disruption effects of higher production and consumption may really make people worse off. We may have welfare-reducing growth but for the positive effects of the advancement in knowledge. (On welfare-reducing growth despite individual and government optimization, see Ng & Ng, forthcoming.) After the survival and moderate comfort levels (wen bao3 溫飽 and xiao3 kang 小康), since the positive effect is really very small in terms of long-term real happiness, it is still irrational even at the individual level to sacrifice things more important for happiness such as family, friends,

health, and even safety and freedom in order to make more money as many people obviously do, including myself to some extent.) But why do people have such irrational preferences? To a large extent, this may be explained by our accumulation instinct and instinct for competition for relative standing (nature) and the effects of the omnipresent advertising and peer influence in our commercial society (nurture). (See Ng 2000c for more details.)

3.2 The East Asian happiness gap: Speculating on its causes

Even if high incomes no longer increase happiness, perhaps, dynamically, we need rising incomes just to sustain happiness at an unchanged level, the so-called 'hedonic treadmill'. The East Asians have not only high income levels but also high rates of growth in incomes. On these counts, they should be happier than others. Despite these, they are less happy than others. This may be called the East Asian happiness gap. Since our measures of happiness are not foolproof, we cannot be completely confident of the existence of such a gap. However, there is sufficient evidence for provisionally accepting the hypothesis of a gap before it is overthrown by more solid evidence.

Some explanations of the East Asian happiness gap are related to the explanation of the rat-race in the previous subsection. First, the higher congestion, pollution, and other forms of environmental disruption caused by high growth in production and consumption, especially in the heavily congested cities and industrial areas may partly explain why the rapid growth in East Asia is not an unmixed blessing, to say the least. These problems also exist in the West, but are more serious in East Asia due to the higher population density and more inadequate environmental protection. Some more genuine indicator of progress that take account of congestion and environmental disruption that are largely ignored by the conventional GDP may show that the growth rates are not as spectacular. A recent report indicates that fish from the rivers and lakes of Taiwan are not suitable for consumption. Certainly at the margin, it is undesirable to poison our air and water to have additional inessential output. 'The human costs in ill health in cities such as Bangkok, Chongqing, Jakarta, and Shanghai are intolerable. In East Asia's major cities, air and water pollution are the sources of some 200,000 premature deaths, 650,000 cases of bronchitis, and 2 billion person-days of respiratory symptoms each year' (Walton 1997, second paragraph before conclusion).

Secondly, the East-Asians are reputed to be highly competitive. This partly explains their economic success. However, the very high degree of competitiveness may be detrimental in achieving happiness both at the individual level and, even more

so, at the social level. One aspect of competitiveness is trying to surpass others. An individual may succeed in surpassing others but for the whole society, an individual on average cannot surpass others. Much effort in achieving relative distinction, if spent on areas without significant external benefits, may thus be largely wasted socially. (Thus, people should compete in areas with external benefits such as contributions to knowledge and society.) Another aspect of competitiveness is not being contented with one's current achievement and wanting to do better. While this may propel progress in objective terms such as production, it is likely to be detrimental to contentment and happiness.

Buddhism, Hinduism, and Taoism are more emphatic on the virtue of contentedness while Confucianism is, at least relative to the previous three, more emphatic on the virtue of achievement. While Buddhism and Taoism are still believed in parts of East Asia, their influence has largely waned, especially relative to the importance of Buddhism and Hinduism in India. Perhaps this partly explains the higher happiness level in India despite its much lower per capita income relative to East Asia.

It is true that we need some degree of competitiveness just to survive and a little more to make progress. However, too high a degree of competitiveness may be detrimental to happiness. In fact, one of the reasons the East-Asians have a high degree of subjective competitiveness may be due to the high degree of competitiveness that has existed objectively for many generations. The competitive environment favours those with a high degree of competitiveness which in turn increases the competitiveness of the environment, completing a vicious cycle. However, the cycle is not unchecked as excessive competitiveness also generates detrimental effects.

Thirdly, the educational method and general cultural influence of the East Asians are also highly productive in competitive achievements (especially in formal examinations) but likely detrimental to real creativity and personal and social happiness. According to the Third International Mathematics and Science Survey Report on year-8 students (reported in the mass media internationally on 6-7 December 2000), East-Asian countries/regions (Singapore, Taiwan, South Korea, Japan; but Mainland China was not included in the survey) lead the international groups of 38 countries/regions including Australia, Britain, and the U.S. (The top scorers for maths are: Singapore 604, South Korea 587, Taiwan 585, Hong Kong 582, Japan 579 against the average of 487. The top scorers for sciences are: Taiwan 569, Singapore 568, Hungary 552, Japan 550, South Korea 549 against the average of 488.) Commenting on

this report, Yuan Tzeh Lee (李遠哲, a Nobel laureate and President of Academia Sinica in Taipei) said, 'Most Taiwan students are good in examinations. Their performance in science and mathematics are good at the stage of high school. However, after graduating from high schools, they become exhausted, as if going to retire ... The educational system in Taiwan is very repressive of curious students interested in pursuing creativity. This is very bad.' (My translation from a report in *China Times*, 7 December 2000, p.7.) At least to a large extent, this remark is also applicable to other East-Asian regions and also with respect to happiness, not just with respect to creativity.

Fourthly and relatedly, East-Asian culture (especially its educational system) is over-emphatic on conformity, order, and the collective interests to the detriment of individualism, freedom, and hence happiness. It is true that individual freedom must not be excessive either, as the welfare of others may be adversely affected by the relentless and unrestricted pursuit of individual freedom. However, while the West may be somewhat over the delicate tradeoff to be too emphatic of individualism in some aspects, the East-Asians are likely to err in the opposite direction by a wider margin. An important explanation of this big difference is probably related to the relative effectiveness of the legal system in the West which can be relied more to control the excess of individual freedom. This means that, with the legal system strengthened (as obviously very successful in regions like Hong Kong and Singapore), East-Asians may move towards the direction of freedom and individualism to increase happiness.

Happiness researchers remark: '... in the Latin nations, such as Colombia, there is a tendency to view pleasant emotions as desirable... In contrast, in Confucian cultures, such as China, there tends to be relatively more acceptance of unpleasant emotions and relatively less acceptance of pleasant emotions... In China the ideal level of life satisfaction was considered to be neutrality – neither satisfied nor dissatisfied' (Diener & Suh 1999, pp.443-4). Eastern researchers also agree on the 'abstinence' (禁慾) tendency of Confucianism. For example, 'in Confucian culture ... abstinence is an important factor' (Fu 傅佩榮 1989, p.51; my translation) and 'hedonistic striving for happiness is regarded as unworthy and even shameful' (Lu & Shih 1997, p.183; see also Fang 1980, p.153.). How can one enjoy life happily if one is brought up to be adverse to pleasant feelings?

One indication of the abstinence tendency is the high average age of first time in

having sex. In comparison to the overall average of 18.1 (years old) and the lowest average U.S. figure of 16.4 and Brazil of 16.5, the average figures for East-Asian regions are China 21.9, Taiwan 21.4, Hong Kong 19, Japan 18.9. (From the same Durex survey mentioned above.)

Fifthly, East-Asian culture is too emphatic on appearance, on not losing face and less on the real content and true feelings. The importance of 'face' (面子; mian⁴ zi³) is well-known. The emphasis on outward appearance in contrast to inner content may be 'spotted' (可窺一斑) in the example of the styles of buildings. The Temple of Heaven (天壇) in Beijing is extremely impressive looking from outside but rather ordinary inside. Most Western churches look rather dull from outside but are well furnished and decorated inside. When my father (born in China and lived in Malaysia for decades) first saw our flat (rented) in Australia, he thought that the building (brick-veneered) looked unfinished. When he went inside, he found it very comfortably furnished. Many flats in East Asia have a very small bathroom and kitchen but relatively large 'visitors hall' (客廳) which is known in the West as the lounge room or living room. This difference in the naming of the same room also betrays the difference in emphasis between the East (to impress the visitors) and the West (for the comfort of the family). To what extent is this a reflection of more visitors rather than a difference in emphasis remains to be investigated.

For another example, when advising their children regarding marriage, most Western parents put happiness first. In contrast, many East-Asian parents emphasize the family backgrounds (門當戶對) and other objective aspects. It is more important to them (at least relative to people of the West) for the marriage to look good in appearance than for the children to actually have a happy life.

Of course, happiness is also affected by biological factors. However, since they are less amenable to policy influence (except in the future when genetic engineering may be safely used), they are not emphasized here. (On the use of brain stimulation for pleasure, see Ng 2000b).

While cultural differences are important, their role must not be exaggerated. Cultural differences do make a difference as to what factors may affect happiness (e.g. Christopher 1999) but not with respect to the concept and ultimate value of happiness as such. Moreover, there are largely universal factors determined by biology. Thus, Maslow's (1970) need-gratification theory of well-being is largely universal. Also, I

believe that, at the ultimate level, happiness as the rational end is culturally independent. It may be thought that my personal views on happiness are largely due to the influence of Western culture. However, I can vouch that I was brought up in largely Eastern influence, attending only Chinese schools and university in Malaysia and Singapore before my time of post-graduate study. Even now, my cultural influences are more Chinese than Western. For example, I still read most non-economics books and magazines in Chinese and listen mostly to Chinese music. I can read and write in Chinese twice as fast as in English. Moreover, I was almost a born (moral philosophical) utilitarian. I can distinctly remember that I had virtually full-grown utilitarian views by the age of around 6.

Some researchers exaggerate the cultural difference. For example, Lu & Shih (1997, p.181/2) mention that 'the word happiness did not appear in the Chinese language until recently', suggesting that the concept of happiness is alien to the Chinese people until recently. This is certainly misleading. It may be true that the modern phrase for happiness in Chinese (快樂; kuai4 le4) appeared only recently. However, the ancient word for happiness in Chinese (either kuai4 or le4) appeared from time immemorial. For example, le4 appeared in such ancient expressions as 'Friends coming from afar, am I not happy?' and '[I am] so happy, no more thought of shu3', with the clear meaning of happiness. I suggest that such primitive concepts as happiness are universal and should exist in all cultures from time immemorial, probably not long after the evolution of *homo sapiens*, if not earlier.

4. Some Implications

As the study of happiness has not been well developed (e.g. the only journal specializing on the study of happiness, the *Journal of Happiness Study* has just commenced publication), the importance of happiness and the preliminary results on the failure of higher income/consumption to increase happiness imply that a lot more resources should be used for happiness study. How could the measures of happiness be made more reliable and comparable interpersonally? Does the East-Asian happiness gap really exist? Are people of East-Asian origin but living in the West also less happy? How could happiness be increased? Such questions are very important but very much under-researched. The desirability of higher public spending applies to many other areas including environmental protection, public health, education, and research (Ng

2000b).

It is true that much of public spending involves some wastes and inefficiencies. However, most people (including economists) are insufficiently aware of the much grosser inefficiency of private consumption through environmental disruption, mutually canceling competition between individuals and nations, the largely ignored adaptation effects, and advertising-enhanced irrational bias towards material consumption (Ng, forthcoming). It is also true that we have to look not only at the benefits of more funding but also the costs. However, economists overestimated the costs of public spending. This overestimation arises from: 1. Economists' emphasis on the excess burden of taxation, ignoring that this is largely offset by the negative excess burden on the spending side; 2. the failure to take account of the environmental disruption effects of most production and consumption (which make taxes largely corrective than distortive), relative-income effects (which bias in favour of private consumption; Ng 1987a), and burden-free taxes on goods with diamond effects (Ng 1987b); 3. the failure to recognize the fact that, in non-poor countries, higher private consumption does not increase happiness at the social level, making the happiness cost of public spending virtually zero (Ng 2000d).

The negative excess burden on the (public) spending side is emphasized by Kaplow (1996) and Ng (2000a). To see the point simply, suppose that the benefit of a public good is proportional to the income level of the taxpayers, it may be financed by a (or an increase in) proportional income tax without any disincentive effects. The proportional income tax itself may involve a disincentive effect. However, the tax plus the public good together involve no disincentive effect. Suppose that, for each \$100 earned, \$20 have to be taxed. Is not the incentive to earn more income less than the case where one can keep the full \$100? This lower incentive may well apply if the tax revenue is thrown into the ocean. However, normally the revenue is used for public spending that the taxpayers value more or at least no less (otherwise the public spending is inefficient even using the benefit/cost ratio of one). Suppose the tax revenue is used for police protection of property whose benefits are roughly proportional to the income level. Then, each individual may in fact has higher incentive to earn the protected \$80 than the unprotected \$100.

More importantly, if private consumption no longer increases happiness socially, higher public spending may be very costly in money terms but not at all costly in happiness terms. Since happiness is and money is not the ultimate objective,

cost-benefit analysis should ultimately be done in happiness (equivalent to welfare) terms. (See Ng 2001 for details, including the unexpected result that the consumption benefits of public projects should be adjusted upward but not the productive benefits.)

Despite the failure of higher incomes to increase happiness, I continue to believe in the usefulness of economic growth. However, the direction of growth has to be appropriate. First, the protection of environmental quality has to be a top priority. We want clean growth, not dirty growth. Secondly, we want growth that can really increase our happiness. This includes less on largely mutually canceling competitive private consumption and more on areas of public spending that can really increase our welfare. Among others, this includes more public funding for research to find out more.

Another implication is the need, both at the individual and the social level, to put more emphasis on things that are much more important to happiness than money, including health, relationships, and spiritual fulfillment. In particular, for the developed parts of East Asia, more reflections on the East-Asian happiness gap are needed. Perhaps it is desirable to realize more about the illusions of the irrational accumulation instinct, to resist more the temptations created by the omnipresent commercial advertising, to reduce our competitive nature, to divert competition from consumption to social contributions, and to make **less** money in order to enjoy life more. East-Asians may not only achieve more happiness this way, but also, by reducing and redirecting their lopsided growth, contribute to a better global environment. (This touches on the issue of international cooperation to address the problem of international competition, a negative-sum game, on which I hope to discuss in another paper.)

However, there are still large parts of East Asia where the majority of people are still very poor by any standard and where economic growth will likely increase the happiness of people significantly. For purely economic development, perhaps the Asian Development Bank and other institutions should give much more emphasis to the development of such areas, including the western regions of China. Nevertheless, even for the more developed areas of East Asia, the ADB and other institutions may still have very important roles to play if they give more emphasis on factors really important for happiness such as public health, the environment, and above all, the advance in science, technology and knowledge in general.

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