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**COMPETITIVE CONSPICUOUS CONSUMPTION, HOUSEHOLD SAVING AND
INCOME INEQUALITY**

Herbert Walther

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by

Herbert Walther

Vienna University of Economics and Business Administration

Reithlegasse 16/1/4,

A-1190 Vienna Austria

Phone: 0043/1731336/5800;

Fax: 0043/1/313365835

E-mail: Herbert.Walther@wu-wien.ac.at

Abstract

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Competitive Conspicuous Consumption, Household Saving and Income Inequality

Herbert Walther¹

¹ Address: Vienna University of Economics and
Business Administration - 1190 Vienna, Reithlegasse
16/1/4, Austria (Phone: 0043/1731336/5800; Fax:
0043/1/313365835; E-mail: Herbert.Walther@wu-wien.ac.at).
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JEL Classification: D 9, E2

Introduction

An intertemporal decision model is presented with the suggestion that competitive conspicuous consumption (CCC) may be used as a strategic device to signal latent productivity to potential cooperation partners. In an uncertain and competitive environment where the present income of any ("young") subject is a weak predictor of future productivity, subjects in search of partnerships might try to impress prospective partners by saving less for retirement (relative to what is expected according to the permanent income hypothesis), signaling strong confidence to end up in their future state. Excess consumption might be interpreted by potential cooperators as an indicator of latent productivity. Obviously, such a strategy would only make sense during (early) active periods of life and not shortly before and/or during retirement².

Note that the competitive conspicuous consumption (CCC) hypothesis differs from the "Keeping up with the Joneses"-hypothesis, which is unable to explain "excess consumption" (Abel, 1990; Campbell and Cochrane, 1999; Harbough, 1996) in the context of rational intertemporal decision making: "Since saving represents future consumption, saving less implies consuming less in the future, thus falling further behind the Joneses" (Romer, 2001, p. 333).

The presented hypothesis also differs sharply from the "wealth-is-status" story

² There is an analogous phenomenon in the area of evolutionary biology exists where certain "wasteful" strategies (e.g. the peacock's wheel) are used to signal genetic superiority.

presented by Cole, H. et al. (1992)), which tried to model the influence of different social norms on saving decisions. They presented an elaborated matching model, where the allocation of non-market goods (e. g., mating "women" with different natural endowments) depends on the status of "men" and status depends on relative (inherited) wealth. For intuitively obvious reasons, in the setting of overlapping generations (temporary) "oversaving" evolves in the "status-is-wealth" equilibrium if "fathers" care for their "son's" utility exclusively³.

One basic problem with these arguments is that wealth as such is often not directly visible to subjects deciding upon the allocation of non-market goods⁴ - in contrast to levels of conspicuous consumption (e. g. living in luxury apartment, driving an expensive car, throwing huge parties, buying expensive works of art).

Secondly, in any competitive economy, where the subject's current and future productivity is the main pillar of sustainable wealth⁵, any estimate about a subject's wealth involves a judgement about his/her uncertain future produc-

³ In the long-run equilibrium of the status-is-wealth model, however, "oversaving" disappears for plausible parameter values.

⁴ Donald Trump is presented by Cole, H. et al. as a vivid example for the dominance of a relative wealth motive of saving. Let us ignore the gossip in the tabloids and ask: How rich is Donald Trump really? Has anyone calculated his net-wealth precisely? How credible, after Enron et al., is this calculation to other persons? If, however, Trump is being capable of financing a further glamorous wedding, inviting hundreds of people to an exclusive resort, he might "reveal" to the public that he is rich (or at least demonstrating strong confidence to remain so in the future).

⁵ Piketty and Saez (2003) have shown that today's typical rich Americans are the "working rich", which points to the importance of productivity and innate talent (instead of pure heritage within dynasties).

tivity. Signaling strong confidence with regard to one's own productivity in the future is the essence of the CCC-hypothesis.

Thirdly, albeit Cole, H. et al. (p. 1119) point explicitly to the importance of the "wealth-is-status" motive for the US-society, the implied "oversaving" does not seem to be an empirically relevant issue. Quite to the contrary, the real issue seems to be, "why so many households do not save" (Lunardi, 2000). Starting from "a mounting set of evidence that consumption falls sharply at retirement, and much more than can be rationalized by explanations consistent with traditional models of saving", Lunardi (2000, p. 8) uses hyperbolic discounting and planning costs to explain this type of behavior. While the "hyperbolic discounting" hypothesis (Laibson, 1997; Caplin, A. and J. Leahy (2003)) deserves serious attention, it does not solve the puzzle of why US-households in particular should suffer so much more from "hyperbolic discounting" than their Japanese or German counterparts.

CCC also differs slightly from the famous conspicuous consumption (CC-) hypothesis brought forward by Veblen (1899). Veblen pointed primarily to the forces of habits, tradition and cultural values to explain this type of behavior. While it seems obvious that cultural values are important in explaining concrete manifestations of CC (as will be argued in detail below), an analogous criticism can be brought forward against "habitual CC" as against the "Joneses" hypothesis. However, adding a competitive signaling "twist" to the CC hypothesis may solve this puzzle, while at the same time retaining the fun-

damental insight of Veblen that concrete manifestations of CC are strongly shaped by the society's historical moral values.

In a society dominated by competitive markets and utilitarian ethics, where self-esteem and status (which has to be interpreted as an admission ticket to productive networks) basically depend upon relative contributions to a common product (measured by the market value of this contribution), and at the same time the possibility of contributing depends upon the chance of finding (equally or more) productive partners, the use of scarce resources to signalize superior potential productivity is a natural reaction. As argued below, the question of whether and how CC (or any alternative instrument) is used as a competitive signaling device has to be linked to dominating cultural values and "role models" conveyed by society and media.

One important implication of the CCC-motive is that rising income inequality might reduce household saving (in the long-run) – in stark contrast to conventional wisdom of Keynesian as well as orthodox theories.

Another interesting implication arises if the CCC-motive dominates the precautionary motive of saving in the setting of overlapping generations: A Keynesian consumption function with declining marginal propensity to consume can be derived. If the precautionary savings motive dominates, an implausible convex consumption function results.

One further implication is that egalitarian policies (which reduce the incentive

for CCC) may have completely different effects on household saving than pure welfare policies (which reduce liquidity barriers and therefore also precautionary saving).

1 The basic model

In this model, three periods of life (not necessarily of equal length) are distinguished: The present and first active period $t = 0$, when the subject j gets $y_{0,j}$ with certainty; the future active period $t = 1$, for which the subject has expectations with respect to uncertain income realizations; and the retirement period $t = 2$, when consumption will be equal to savings from the first two periods. For the sake of simplicity, the rate of interest and the rate of time preference both are set equal to zero. Let $y_{1,j}^h(y_{1,j}^l)$ be the highest (lowest) possible state of income for subject j in period $t = 1$, and $c_{t,j}^h(c_{t,j}^l)$ the corresponding levels of consumption in period $t = 1, 2$. The index below the operator E refers to "expectation relative to the state of information in period $t = 0$ ". The subject j maximizes expected utility of consumption

$$\sum_{t=0}^{t=2} E_0 u(c_{t,j}) \quad (1)$$

subject to the following two constraints:

$$c_{0,j} + E_0(c_{1,j}) + E_0(c_{2,j}) - y_{0,j} - E_0(y_{1,j}) = 0 \quad (2)$$

$$\sum_{t=1}^2 (c_{t,j}^h - c_{t,j}^l) - (y_{1,j}^h - y_{1,j}^l) = 0 \quad (3)$$

The first constraint states that the expected income during active periods must be equal to expected consumption during active periods and retirement. The second constraint follows from the necessity that each income/consumption path must be balanced separately.

$$c_{2,j}^h = y_{0,j} - c_{0,j} + y_{1,j}^h - c_{1,j}^h \quad (4)$$

$$c_{2,j}^l = y_{0,j} - c_{0,j} + y_{1,j}^l - c_{1,j}^l \quad (5)$$

Subtracting (5) from (4) yields 3.

CCC is used to increase the probability of becoming rich by signaling optimistic income prospects. The probability p_j that the subject j will defeat k (assumed to be perfectly symmetric in all respects) in a competitive consumption tournament is

$$p_j = \Pr(c_{0,j} + \epsilon_{0,j} > c_{0,k} + \epsilon_{0,k}) \quad (6)$$

where ϵ is a symmetrically distributed measurement error of latent productiv-

ity \hat{y}_j

$$\hat{y}_j = c_{0,j} + \epsilon_{0,j} \quad (7)$$

$$E(\epsilon_{0,j}) = 0 \quad (8)$$

Therefore

$$p_j = p_j(c_{0,j} - c_{0,k}) \quad (9)$$

$$\frac{\partial p_j}{\partial c_{0,j}} > 0; \frac{\partial p_j}{\partial c_{0,k}} < 0; p_j(0) > 0 \quad (10)$$

Maximizing the Lagrange function $L_j = L(c_0, c_1, c_2, \lambda_0, \lambda_1)$ ⁶, where λ_0, λ_1 are the Lagrange multipliers for (2) and (3), we get the following first order

⁶ For notational convenience only, from this point on we will ignore the index j in the variables.

conditions

$$\begin{aligned}
\frac{\partial L_j}{\partial c_0} &= u'(c_0) + p'(0) \sum_{t=1}^2 (u(c_t^h) - u(c_t^l)) \\
-\lambda_0 \left(1 + \frac{\partial E_0(c_1)}{\partial c_0} + \frac{\partial E_0(c_2)}{\partial c_0} - \frac{\partial E_0(y_1)}{\partial c_0} \right) &= 0 \\
\Rightarrow \frac{\partial L}{\partial c_0} &= u'(c_0) + p'(0) \sum_{t=1}^2 (u(c_t^h) - u(c_t^l)) \\
-\lambda_0 \left(1 + p'(0) \left(\sum_{t=1}^2 (c_t^h - c_t^l) - (y_1^h - y_1^l) \right) \right) &
\end{aligned} \tag{11}$$

$$\frac{\partial L_j}{\partial c_1} = E_0(u'(c_1)) - \lambda_0 = 0 \tag{12}$$

$$\frac{\partial L_j}{\partial c_2} = E_0(u'(c_2)) - \lambda_0 = 0 \tag{13}$$

$$\frac{\partial L_j}{\partial \lambda_0} = c_0 + E_0(c_1) + E_0(c_2) - y_0 - E_0(y_1) = 0 \tag{14}$$

$$\frac{\partial L_j}{\partial \lambda_1} = \sum_{t=1}^2 (c_t^h - c_t^l) - (y_1^h - y_1^l) = 0 \tag{15}$$

Using (15), (11), (13) and (14), the essence of our argument can be represented by

$$u'(c_0) + p'(0) \sum_{t=1}^2 (u(c_t^h) - u(c_t^l)) = E_0(u'(c_1)) = E_0(u'(c_2)) \tag{16}$$

This implies ($p'(0) < 0$) that c_0 will be distorted upwards, while $c_1^h = c_2^h \equiv c^h$ and $c_1^l = c_2^l \equiv c^l$. Assuming, for the sake of simplicity, that all periods are of equal length,

$$u'(c_0) + 2p'(0)(u(c^h) - u(c^l)) = E_0(u'(c_1)) \tag{17}$$

Assuming further

$$u(c_t) = c_t - \frac{a}{2} (c_t)^2 \tag{18}$$

(17) can be solved for

$$c_0 = \frac{2p'(0)(u(c^h) - u(c^l))}{a} + E(c_1) \quad (19)$$

Consumption in the first period rises above what the permanent income hypothesis predicts. "Excess consumption" depends upon the expected marginal effects of competitive consumption on the probability of the better outcome, upon the absolute difference in utility between the best and the worst outcomes and upon the subject's degree of risk aversion. Obviously, in any multivariate context, where other variables besides CCC are influencing the marginal probability of "moving upwards" $p'(0)$ will be smaller.

The model has an intriguing implication with respect to egalitarian policies. Assume that a negative income tax scheme is introduced where the subject has to pay taxes (or receives transfers) in proportion to income above (below) his/her present income y_0 .

$$T = \theta(y_1 - y_0) \quad (20)$$

Let us further assume that the subject's current income is just equal to the "average income".

$$y_0 = py_1^h + (1 - p)y_1^l \quad (21)$$

As one can easily verify, any change in θ will act as a pure distributive measure, leaving the expected income unchanged in the second period relative to income in the first period, while at the same time expected net taxes will be equal to

zero. The subject anticipates that the range of potential income levels after taxes will become more egalitarian. After the resolution of uncertainty at the beginning of period $t = 1$, income has realized either at $y_1^h > y_1^h - \theta(y_1^h - y_0) > y_0$ or at $y_1^l < y_1^l - \theta(y_1^l - y_0) < y_0$.

The subject prefers to equalize consumption between periods ($t = 1, 2$) taking into account anticipated net income and accumulated savings from period ($t = 0$). Therefore the highest and lowest levels of consumption in periods ($t = 1, 2$) will be alternatively

$$c^h = \frac{1}{2} (y_1^h - \theta(y_1^h - y_0) + (y_0 - c_0)) \quad (22)$$

$$c^l = \frac{1}{2} (y_1^l - \theta(y_1^l - y_0) + (y_0 - c_0)) \quad (23)$$

Increasing the tax rate implies that the incentive for excess consumption will be reduced, as the difference between the best and the worst case scenario

$$c^h - c^l = \frac{1}{2} (1 - \theta)(y_1^h - y_1^l) \quad (24)$$

becomes smaller. This can also be shown somewhat more explicitly.

Let $y_1^h = 1$ and $y_1^l = 0$. Solving (19) gives

$$c_0 = \frac{1}{2} \frac{p'(0)(1 - \theta)(\theta a(1 - 2p) + 4 - a(1 + 2p)) + 4ap}{a(3 - p'(0)(1 - \theta))} \quad (25)$$

Meaningful solutions require that $(0 < a < 2, 0 < \theta < 1, 0 < p < 1/2, 0 \leq$

$p'(0) \leq 1$). Partially differentiating c_0 with respect to θ shows that any increase of θ will necessarily reduce first period consumption c_0 .

$$\frac{\partial c_0}{\partial \theta} = \frac{1}{2}p'(0) \frac{-a(6\theta + p'(0)(1-\theta)^2)(1-2p) - (12-6a) - 4ap}{a(3-p'(0)(1-\theta))^2} < 0 \quad (26)$$

Simultaneously,

$$\frac{\partial E_0(c_1)}{\partial \theta} = \frac{\partial E_0(c_2)}{\partial \theta} = -\frac{1}{2} \frac{\partial c_0}{\partial \theta} > 0 \quad (27)$$

Consumption of the rich and the poor in the second active period and during retirement change by

$$\frac{\partial c^h}{\partial \theta} = -\frac{1}{2}(y_h - y_0) - \frac{1}{2} \frac{\partial c_0}{\partial \theta} = -\frac{1}{2}(1-p) - \frac{1}{2} \frac{\partial c_0}{\partial \theta} \quad (28)$$

$$\frac{\partial c^l}{\partial \theta} = -\frac{1}{2}(y_l - y_0) - \frac{1}{2} \frac{\partial c_0}{\partial \theta} = \frac{1}{2}p - \frac{1}{2} \frac{\partial c_0}{\partial \theta} > 0 \quad (29)$$

The direct redistribution effect (the first term in (28) and (29)) lowers (increases) consumption for the rich (the poor). The second term results from the additional savings due to reduced CC. Because $p < 1/2$, the weight of the direct redistribution effect must be more important for the average rich than for the average poor.

It is interesting to note that the positive effect of a more egalitarian income distribution on saving depends upon the degree of risk aversion. Two aspects of higher risk aversion have to be distinguished: (1) Higher risk aversion makes

the subject less inclined to use CC as a signaling device in the first place.

$$\frac{\partial c_0}{\partial a} = -2p'(0) \frac{1 - \theta}{a^2 (3 - p'(0)(1 - \theta))} < 0 \quad (30)$$

(2) It also makes the subject more inclined, however, to react to redistribution at the margin.

$$\frac{\partial c_0}{\partial \theta \partial a} = 6 \frac{p'(0)}{a^2 (1 - p'(0)(1 - \theta))^2} > 0 \quad (31)$$

Yet another effect may be present if decision making under uncertainty follows rank-dependent (Quiggin, 1993) or normal-randomness expected utility (Walther, 2003). As income distributions are skewed to the right, subjects may be lured into an “overconfidence effect”, behaving like lottery gamblers. People in the first period generation systematically overestimate the probability of getting rich at any time during her early professional life.

Let us take a look at the marginal propensities to consume by comparing the active groups: first the poor with the middle class,

$$\frac{c_0 - c_1^l}{y_0 - (y_1^l - \theta(y_1^l - y_0))} = \frac{1}{4} \frac{p'(0) (a(\theta(3 - 4p) - (3 + 4p)) + 12) + 6ap}{ap(3 - p'(0)(1 - \theta))} > \frac{1}{2} \quad (32)$$

and then the middle class with the rich.

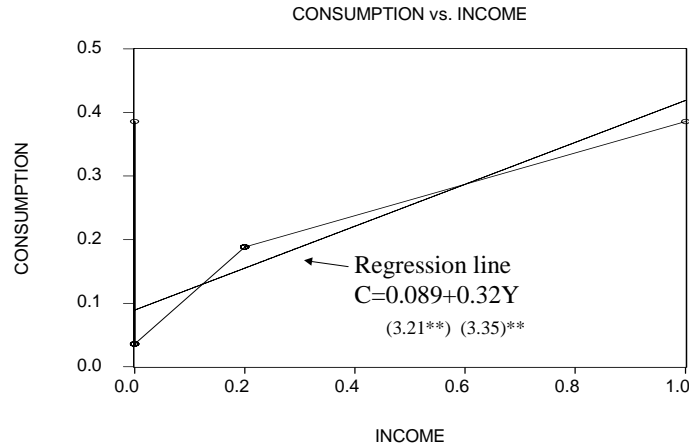
$$\frac{c_1^h - c_0}{y_1^h - \theta(y_1^h - y_0) - y_0} = \frac{1}{4} \frac{p'(0)(a(-\theta(1-4p) + (1+4p)) - 12) + 6a(1-p)}{a(1-p)(3 - p'(0)(1-\theta))} < \frac{1}{2} \quad (33)$$

If no CCC-motive exists ($p'(0) = 0$), the marginal propensity to consume will be equal to $1/2$.

Let us assume a steady state in an overlapping generation context where one third of the subjects is always retired and two thirds are active. Any cross-sectional estimation constitutes a Keynesian consumption function with marginal (and average) propensities to consume falling with rising net income levels. From (32) and (33) it becomes clear that the difference between the marginal propensities to consume becomes more pronounced with higher $p'(0)$. Autonomous consumption is determined by the behavior of the active poor and the retired (poor and rich) group.

Let us illustrate these results using a simple example. Assume an economy in which a total of $n = 15$ subjects are living in a steady state and the following parameter values are predetermined ($a = 1, p = 0.2, p'(0) = 0.15, \theta = 0.3, y_1^h = 1, y_1^l = 0, y_0 = p$). Then ($c_0 = 0.19, c_1^h = c_2^h = 0.39, c_1^l = c_2^l = 0.04$). Fig. 1 illustrates the estimated consumption function and the corresponding observations (connected by a separate line) in this highly stylized example.

A „Keynesian“ Consumption Function



Note that popular Keynesian arguments with regard to the effects of pure redistribution (raising consumption) are no longer true. CCC also destroys the famous random walk attribute of consumption implied by the permanent income hypothesis (Hall, 1978). Again postulating quadratic utility,

$$c_1 = E_0(c_1) + \epsilon \quad (34)$$

$$c_2 = c_1 = c_0 - \frac{2p'(0)(u(c^h) - u(c^l))}{a} + \epsilon \quad (35)$$

Consumption levels will be lower during retirement. Poor subjects may feel ex post regret about excess consumption in the first period.

1.1 The precautionary motive

Let us now integrate a precautionary savings motive into our model in a highly simplified way. In order to succeed in moving upwards within the income

hierarchy, the following two conditions must be fulfilled simultaneously:

- (1) The subject has to win the measurement tournament in the Nash-equilibrium (as described above).
- (2) No liquidity problems are allowed to arise.

Assume that the measurement errors (ϵ_j, ϵ_k) are distributed uniformly around conspicuous consumption (= estimated productivity) levels. Let us further assume that the subject estimates the probability τ_j of encountering liquidity troubles to be an increasing function of “excess consumption” relative to saving without any CCC-distortions. l_j is a rectangularly distributed random variable, deciding upon the violation of the liquidity constraint, c_p denotes permanent consumption without any distortions.

$$\tau_j = \int_0^{\alpha w_j} dl_j \quad (36)$$

$$w_j = \frac{c_j - c_p}{y_0 - c_p} \quad (37)$$

The parameter α indicates the ”strictness” of the liquidity barrier. Define a new variable $z_j = c_j - c_{k \neq j}$. The probability p_j for winning in period zero all $(n - 1)$ consumption tournaments and of experiencing no liquidity problem is

$$p_j(z_j) = \int_{-1/2}^{+1/2} (1 - \int_{-1/2}^{\epsilon_j - z_j} d\epsilon_k)^{n-1} d\epsilon_j \times (1 - \int_0^{\alpha w_j} dl_j) \quad (38)$$

Starting from a Nash-equilibrium ($z_j = 0$), the marginal effect of an increase

in c_j on p_j is equal to

$$\frac{\partial p_j}{\partial c_j} = 1 - \alpha \frac{1 + (c_j - c_p)n}{y_0 - c_p} \quad (39)$$

There is indeed a critical value of the liquidity barrier parameter α , which is high enough to guarantee $p'_j(0) = 0$ and to prevent excess consumption ($c_j - c_p = 0$).

$$\alpha = y_0 - c_p \quad (40)$$

Institutions which strive to reduce the risk of illiquidity (like overdraft facilities, generous bankruptcy rules and/or easy availability of credit cards) on the one hand, pure social welfare institutions (counteracting imperfect credit and insurance markets) on the other hand, will necessarily reduce the importance of the precautionary savings motive. It is however important to take into account that in reality the insurance effects of welfare policies and their egalitarian aspects are extremely difficult to separate. Counteracting effects on saving of welfare policies may be present, if welfare policies are financed by progressive taxes⁷. An exceptional case seems to be Japan, where one of the most egalitarian income distributions in market economies is combined with a low level of public welfare provisions. According to the CCC-model, both factors at work will increase household savings.

⁷ Capital market imperfections (e.g. different downpayment ratios for housing) were brought forward as an explanation for different saving rates by Chiuri, M. C., and T. Japelli (2000). In the present context the coverage risks for health costs or the risk of a sudden depreciation of human capital are more vivid examples.

What is the potential relevance of the case $p'(0) < 0$ which implies “excess saving” due to strict liquidity constraints? Ignoring for the moment empirical evidence (Lunardi, 2000; Attanasio, 1994) in sharp contradiction to any “excess saving” hypothesis (at least for the US), a look at the marginal propensities to consume shows that is also at odds with other empirical facts. “Excess saving” implies that marginal propensities to consume rise with rising income levels – that is the consumption function becomes convex.

Let us add a short remark with regard to labor supply, which will be determined together with consumption in a more general framework: Inevitably, excess consumption in the first active period induces also excess labor supply.

2 Some further qualifications

2.1 *The social context*

The presented model of CCC is obviously inspired by the classic tournament model of relative compensation (Lazear and Rosen, 1981; Lazear, 1998), differing only in its inclusion of a signaling variable used to increase the probability of moving up the hierarchy, switching from “effort” to CCC.

A necessary condition for the relevance of CCC is that actual productivity, income and consumption levels are positively correlated. This requires that socially more acceptable or less expensive signals of latent productivity are

not easily available. If markets are highly imperfect ("class barriers"?), the correlation between productivity and income may be low and the same will be true of income and consumption levels if preferences are heterogenous. One might speculate that excess consumption is discouraged in traditional societies where social networks, family roots and heritage (or - in the extreme case - belonging to a certain caste, like in India) are relevant to overcoming entry barriers to higher income professions. If subjects do not see any chance of overcoming social barriers, household saving should be higher. Rich subjects can even afford to behave conspicuously modest, using "understatement" as a signal of "nobility", without being afraid of becoming erroneously assigned to a lower status.

On the other hand, there do exist many examples of traditional societies where CCC played a non negligible part. The historical "dynasty towers" in San Gimignano (Italy), represent a nice example of seemingly wasteful competition between various families of the upper class in a medieval society. Was this curious kind of competition (each family trying to outdo the others by adding height to their own tower) a simple quest for "status"? Or was it rather a conscious signal of prosperity and wealth (like many other monuments), offering prospective coalition partners a clear hint of whom they should trust and associate with in the future? Such signals may have been particularly important at a time when property rights were unsure and power structures fragile creating an urgent need for coalition partners, as was surely the case when adventurous

”condottieres” could come to power overnight. If, however, property rights are similar to feuds, revocable by a strong center of (”totalitarian”) power, while for the same reason establishing ”conspiratorial” coalitions becomes difficult, the incentive to use CC as a competitive weapon may be reduced⁸.

As a rule, feudalism - where coalition building by the way of family bonds was extremely important - seems to have been particularly vulnerable to CCC (as pompous castle’s aptly demonstrate). It is interesting to note that religious and social protest movements of the past (like Franciscus of Assisi, Martin Luther, Calvin, early socialists etc.) seemed to have been motivated more by a strong resentment against CC of the aristocrats (and the early capitalists) rather than by any strict preference for egalitarianism; this indicates not so much an abstract desire for distributive justice (or plain envy), but a genuine longing for less wasteful CC and a “morally superior” use of scarce resources. It is extremely difficult to separate the influence of those moral values working specifically against CC, from general egalitarian attitudes.

The intimate relationship between egalitarian and anti-CCC-attitudes is clearly visible in various institutional settings. A vivid example can be found in schools (or other institutions, like religious fraternities), which require uniforms in or-

⁸ Take a look at the (sometimes) extreme CCC-behavior of the new Russian ”tycoons”. It is obvious that the CCC of the ”nouveaux riches” might be politically destabilizing a country where the vast majority of people is still starving. The recent attacks of the government, in which (some) property rights were challenged (a clear-cut sin in the eyes of the World Bank), may change the mood of the ”nouveaux riches” toward ”hiding wealth” and (perhaps even) reducing CC.

der to reduce CCC ("who is most fashionable dressed") by simultaneously directing competition toward relative effort ("who is most diligently accumulating human or moral capital"). Those institutions seem to be aware of a substitutive relationship between different types of "competition", thus promoting a morally superior use of scarce resources.

In modern societies, educational signals may act as an alternative signal for at least some prospective innate abilities. On the other hand, subjects with similar formal education may nevertheless differ widely with regard to self-confidence, ambition and career-orientation. Furthermore, educational signals often lack the visibility of CC and have to be communicated in more subtle ways. A place for CCC remains even in countries where formal education is highly important for moving up the income ladder.

Deeper insights with regard to the intercultural differences in attitudes and moral values related to CCC-type of behavior will have to be extracted by sociologists, psychologists and historians alike in order to attain a better understanding of the potential relevance of CCC in different countries.

2.2 Inequality, saving and growth

A crucial yet often neglected question with respect to cross-sectional and/or intertemporal studies of the relationship between inequality, saving and growth seems to be whether excess consumption is supported and/or even provoked by

moral values (or shared beliefs) which dominate social life. Those moral values need not be explicitly defined but might be transferred instead by certain role models articulated by the (more or less) visible lifestyle of the upper class.

While culturally determined anti-CC attitudes naturally reduce distortion towards present consumption, it does not seem realistic to assume that the excess consumption bias will be completely extinct. While societies differ with respect to the relevance and concrete manifestations of CCC, some distortion towards present consumption will be at work everywhere, for the trivial reason that with imperfect information any transaction and cooperation with non-familiar subjects requires some mutually off-setting “marketing expenditures” (signals of latent productivity).

How do these arguments fit into the “inequality and growth” literature?

One basic basic message conveyed in the literature is that income inequality, while necessary to reward differences in productivity and to stimulate effort, also increases political pressures towards redistribution, which acts as a disincentive against capital accumulation through various channels - expropriation of past investments, rent-seeking or predatory activities on the part of the poor, etc. This hypothesis is often qualified by the argument that redistribution to the poor, while presumably weakening saving and effort incentives, may also help to overcome credit rationing for the poor or reduce the incidence of destructive behavior.

Bénabou (2000) presents an interesting model, based on the assumption of imperfect credit markets. Bénabou shows that multiple equilibria (high/low inequality) are easily possible, if greater inequality feeds back into the political system by lowering political influence of less educated (= poorer) subjects. This chain of reasoning can be refined in various ways using CCC.

For at least three reasons, in an already inegalitarian environment political support for egalitarianism will even be lower than the imperfect credit market/human capital argument suggests:

(1) Young subjects (who on average already lived "beyond their means" in terms of permanent income during period ($t = 0$)) anticipate that their saving decision will have been based upon false premises if sudden egalitarian redistribution takes place. As long as their hopes to become rich are still alive, subjects will oppose egalitarian measures. A similar argument was brought forward long ago by Hirschman's and Rothschild's (1973) theory of a 'tunnel effect'.

(2) Publicly confessing to be in favor of redistributive policies might be interpreted as a signal of low potential productivity, diminishing chances of finding productive partners in the future. Only "losers" who do not expect to get rich for lack of innate productivity would be in favor of egalitarian policies⁹.

⁹ Although it would be tempting to do so, I will not speculate as to why so many economists so vigorously reject egalitarian policies.

(3) Any "overconfidence effect", which will be particularly strong for skewed lottery-like outcomes, might also support "excess consumption". In the NREU-model (Walther, 2003), a high rate of time preference increases the strength of the "overconfidence effect" inducing risk-seeking behavior for lottery like outcomes. The very same category of subjects already at risk of saving insufficiently may also act overconfidently with regard to getting rich in the future¹⁰.

2.3 Some empirical implications

The CCC hypothesis has highly specific implications.

(1) The abolishment of dividend taxation by the Bush-administration provides an interesting experiment. While under restrictive conditions (i.e. neutralizing the income effect for a specific "representative" subject by combining lower dividend taxation with higher consumption taxes) the classical model clearly predicts an increase of household saving, CCC might act as a countervailing force. Because dividend income is highly concentrated in the hands of the happy few, net income differences will rise. Given the specific background of a highly competitive (and already unequal) US-society, this might inspire more and not less CCC (at least in the long-run, when visible CC-differences feed

¹⁰ „Interestingly, Americans are usually over-optimistic about their chances of promotion. An opinion poll a couple of years ago found that 19 % of American taxpayers believed themselves to be in the top 1 % of earners. A further 20 % thought they would end up there within their lifetime.“ (Economist, Sept. 6th, 2003, p. 44)

back into expectations).

(2) Consider employees in certain sectors of the economy with definite long-term career perspectives highly which are highly transparent to outsiders (teachers in public schools, civil servants and the like). Excess consumption should not be as relevant for those groups as for young managers or self-employed people, who are highly dependent in their career upon ever-changing social contacts and burdened with the constant need to impress others by "signaling" high potential productivity. In the case of civil servants, CCC-behavior might even be punished by social vindication, as overly optimistic income expectations might easily be identified and even raise suspicions with respect to corruption.

(3) There may also be gender specific differences with respect to the relative importance of CCC - young male subjects might be the group most vulnerable to excess consumption, given the fact that risk-preferences seem to be gender specific and young men are less risk-averse than young women (take a look at crime rates, accidents due to risky activities or experimental evidence¹¹).

¹¹ A survey of empirical studies by psychologists (Byrnes, J., Miller, D. C. and Schafer, W. D., 1999) provides overwhelming evidence that men seem to be more ready to take risks. Recently, in a carefully designed experiment those results were confirmed by Fehr-Duda, H., de Gennaro, M. and Schubert, R. (2004).

3 Summary

An intertemporal decision model is presented in which subjects try to signal latent productivity to potential cooperative partners by increasing consumption levels in "early" income periods above those predicted by the permanent income hypothesis. The "Keeping up with the Joneses"-hypothesis is enriched by a competitive signaling twist. Contrary to conventional wisdom, egalitarian policies might increase household saving by mitigating competitive conspicuous consumption (CCC). It is argued that egalitarian policies have to be distinguished from welfare policies which aim to lower liquidity barriers. Lower liquidity barriers undoubtedly reduce household saving.

It is argued that concrete manifestations of CCC and the use of alternative signaling devices are heavily dependent upon the ethical norms and values governing societies life. A highly competitive and market-oriented society (like the US) with a (probably) low degree of capital market imperfections, where most subjects seem to be convinced that income levels, levels of productivity and consumption are strongly and positively correlated and where the income distribution is more unequal and skewed to the right than in most (European) welfare states, might be more inclined to suffer from excess consumption (probably also combined with excess labor supply).

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