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Poor parents, their daughter, her child and her lover

Understanding changes in household size and composition in Kinshasa, D.R.C.

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I. Introduction

One way in which households may cope with economic regress is by restructuring themselves. Pursuing this line of enquiry in the early eighties, Caroline Moser observed *inter alia* that the economic crisis in various poor urban neighbourhoods forced more and more people to stay with their parents, even after having had children themselves. In many cases, such "hidden families" were also, in many cases *mono-parental families,* lone mothers who live with their children in their parents' home[1].

This peculiar phenomenon is interesting for a number of reasons, not in the least because it shows the relative arbitrariness of the delimitation of the most obvious unit of analysis for income-poverty statistics[2]. According to Moser, we should interpret the extended household as a critical safety net, a strategy to pool resources like space and childcare. Lone mothers staying at their parents' can tap into this pool and e.g. allocate reproductive tasks to other household members while they devote themselves entirely to income-generating work. The relevant point of comparison here is the mono-parental nuclear household, where women with very young children are without child support: "They have no alternative to locking their children in the house while they are at work"[3]. This argument rehearses earlier findings[4]. To be sure, an empirical test of this hypothesis produced ambiguous results[5]. In any case, the existing argument about the connection between regress and hidden families is more an argument about efficiency than about re-distribution; whether the gains from increased efficiency can be reaped by the hidden household members rather than by their hosts remains an implicit but unverified assumption. Except for Butler and Horowitz[6], as far as I know little has been published since then to either confirm or challenge Moser's observations. This includes both the observation of a rather spectacular increase in the proportion of extended households and, more specifically, an increase in hidden (monoparental) families in periods of crisis. One of the reasons for this is that, as Butler and Horowitz acknowledge, "stylized theoretical models have proved incapable, as yet, of meaningfully distinguishing the complex web of intra-household interaction in nuclear and extended households"[7].

In what follows, we will first present some (secondary) data testifying the importance of Moser's observations for Congo-Kinshasa. Then, we will briefly digress on the contours of a household model based on Amartya Sen's work to make some inferences about

resource allocation within extended households. These explorations prepare the ground to examine the well-being implications of this phenomenon for the members of hidden families. We make use here of the results of a small survey we organised in Kisenso, a poor urban suburb of Kinshasa, in 1997. The survey combined socio-economic and anthropometric data on the children living in the sampled households. In this way we were able to measure well-being in terms of the nutritional status of these children. The selection of the zone as well as the sampling procedure and practical difficulties in data-gathering were discussed elsewhere[8]. It suffices to point out, here, that the circumstances in which the inhabitants of Kisenso are living are more or less representative of the livelihoods of one-third of the *kinois*. In a last section, we present some qualitative evidence to come to a better understanding of the phenomenon in the context of economic regress.

II. Extended families and hidden households: the case of Kinshasa.

To begin with, there is some evidence of a significant increase in household size since the beginning of the current economic crisis in Congo-Kinshasa (mid-seventies). Table 1 provides an indication of the distribution of households in Kinshasa according to the *number of household members* between 1969-1997. For the period 1969-1986 the data are from representative surveys. It is shown that households slightly decrease in size during 1969-1975, but increase from 1975 onwards, from an average of 5.7 to 7.3 in 1986. The data for 1996 and 1997 come from representative surveys carried out in specific urban zones. The 1996-survey was organised in a "planned city", the type of zone in which, in 1969, 1975 and 1986, the households were biggest. The 1997-survey was carried out in a "peripheral" or "semi-rural" zone, a type of zone which hosts about one third of the population, and which was hosting, according to the earlier surveys, the smallest households. If we consider both survey results as indications of respectively an "upper" and a "lower" limit of the "real" household size, the increasing trend already noted for the period 1975-1986 would continue during at least the first half of the nineties.

Table 1. Evolution of household size, Kinshasa 1969-1997

	1969	1975	1986	1996	1997
n° of households surveyed	1471	1367	205	120	180
Household size					
1-3 members	23,1%	29,6%	16,1%	2,7 %	15,0%
4-5 members	24,5%	22,1%	17,6%	14,3%	17,2%
6-8 members	33,1%	27,8%	33,2%	32,1%	36,1%
8< members	19,3%	20,5%	33,2%	50,9%	38,3%
Average Household size:	5,9	5,7	7,3	9,8	7,8
Per person consumption (constant Zaires 1986)	1475 Z	1557 Z	1173 Z		

Source: adapted from Tom De Herdt, *Surviving the transition*, (Ph.D. dissertation, Antwerp University, 2000), pp. 75-81.

Evidence on the composition of the typical household is more shaky still, but nevertheless sufficiently telling. In 1975, 83,3% of all children were either child of the household head or of his[9] partner, only 16,7% could be considered as pertaining to a "hidden family"[10]. By the end of the nineties, the percentage of hidden-family children had increased to between 55% (1996-survey) and 38% (1997-survey, see also table 2).

It is to be noted also that, consistent with Moser's hypothesis, the increase in household size coincides with impoverishment. Indeed, households decreased in size between 1969-1975, when per person consumption rose with 5%, and increased in size between 1975-1986, when per person consumption declined with 25% (see table 1). The hypothesis is also confirmed when we look at the cross-sectional relationship between household size and income at each year: Indeed, poorer households are also bigger[11]. Moreover, the increase in household size undoubtedly reflects an increase in efficiency –in household level consumption[12] and reproduction as well as in income-generation. The problem is, however, that we cannot so easily disentangle the causal connections between poverty and household size[13]. More in particular, if the size of the household would be related to the presence of hidden families, we should see increased household size in the first instance as an *effect* of poverty. Whether it is also *a way to cope* with poverty does not only depend on efficiency-considerations but also on the logic of intra-household

distribution. And as already mentioned above, these household-level budget data don't provide any indication of intra-household inequality.

III. Theorising households, lineages and marriages

In what is at present considered as a first contribution to household economics, Paul A. Samuelson phrases the hypothesis of a consistent family consensus on intra-household resource allocation: each person has his or her own preferences, but "since blood is thicker than water, the preferences of the different members are interrelated by what might be called a 'consensus' or 'social welfare function' which takes into account the deservingness or ethical worths of the consumption levels of each of the members"[14]. It is undoubtedly the fate of so-called first contributions to be cursed by more 'modern' developments, so as to demonstrate the superior relevance of the latter. But perhaps some of the earlier insights should be recovered here: We would agree with Samuelson in that the mere fact of living together is difficult to imagine without a minimal consensus about "deservingness and ethical worths of the consumption levels of each of the members". If blood is thicker than water this implies in the first place that the household members have rather crystallised role expectations about each family member's rights and duties. It is only logical, then, that the normative ideas we have about 'appropriate' and 'deserving' behaviour will play a role in the ideas we have about the allocation of resources.

At the same time, we see no need to confuse blood ties with altruism[15]. Instead, we see much value in connecting Samuelson's emphasis on 'deservingness' to the later generation of household economics models which interpreted the household as a collusive solution of a typical bargaining problem[16]. An important step in this direction was made by Amartya Sen, who proposed to enrich the information base on which typical cooperative-game models were based. More in particular, he proposed that the negotiated arrangement in such situations of cooperative conflict would not only be function of each party's relative bargaining position, but also, among other things, vary in response to moral arguments about 'deservingness'. More specifically, Sen formulated the following hypothesis, called the *perceived contribution response*:

> Given other things, if in the accounting of respective outcomes, a person was perceived as making a larger contribution to the overall opulence of the group, then the collusive solution, if different, would be more favorable to that person[17].

This would be so because the perception of who contributes what and how much does add to "the 'legitimacy' of enjoying a correspondingly larger share of the fruits of cooperation"[18] – 'larger' in comparison to a collusive solution solely based on relative bargaining position, that is. Two elements deserve to be highlighted here.

To begin with, Sen argues that models of intra-household resource allocation might be enriched by adding information on deservingness on top of information on relative bargaining position. But moral arguments for a comparatively larger share are not depleted by taking perceived contribution into account. Pursuing the analogy with Sen's *perceived contribution response*, we might formulate the *perceived inappropriate behaviour response:*

> Given other things, if in the accounting of respective outcomes, a person's behaviour was deemed inappropriate given perceived role expectations, then the collusive solution, if different, would be less favorable to that person.

Further, by adding information on deservingness, Sen does also complexify the connection between what happens within the household itself and its larger environment: household members do not only bring 'interests' to be negotiated, they also bring arguments about deservingness. *In casu*, deservingness has to do with each member's involvement in the labour market. But again, the labour market does not deplete the possible range of institutions from which household members might derive a social status which might be 'converted' into extended entitlements at the household level. Indeed, our general proposition here is that intra-household distribution of resources is function of the way in which different local institutional arrangements in which household members are involved do interact. The institutions in which individuals are involved are not only 'substitutes' to the household, in that they are not only affecting the 'threat-point' in the cooperative bargaining situation. They do also influence intra-household resource allocation by defining appropriate behaviour and thus by generating perceptions of deservingness.

Applying this proposition to the subject of our text, we may refer here to contributions, mainly in the anthropological field, who focus on the *lineage* as one of the major socio-economic units of decision-making in Sub-Sahara African countries[19], and, accordingly, of determining 'appropriate behaviour'[20]. More specifically a 'hidden family' may be conceived as the negotiated outcome of a social struggle where practical intra-household considerations do play a role *side by side* other considerations of appropriateness and shame, e.g. those considerations which reflect the lineage-logic. Indeed, customarily, an unmarried girl-mother loses her quality as *mushika nkunde* (chiluba), literally the thread which weaves together the "tissues" representing the two lineages[21]. Her child is called *cibalabala* (chiluba), literally a maize stalk or "(s)he who lacks profound roots"[22]. Unmarried mothers eventually escaped social death in the countryside by becoming a "free woman" in the city[23]. Though we don't want to imply that these considerations are predominant, especially not in contemporary urban settings where the institutional balance of power has evolved, these elements do in any case suggest that members of hidden families -the 'residue' of a failed marriage- might end up at the losing end of the intra-household bargaining space, whatever the efficiency-gains they may have brought to the household. This hypothesis will be scrutinised further for the case of Kinshasa.

IV. Households, Families and impoverishment in Kinshasa

Table 2. presents a first insight into the family-structure of households in the urban zone of Kisenso we surveyed in 1997. The table also allows us to examine the broad relation between family structure and wealth, as we differentiated household composition according to different terciles (cf. appendix).

Table 2. Variation in family structure and Household Wealth

	Variable	Wealth Tercile			**Total**	F-value
		Poorest	Middle	Richest		
1	#cases	59	61	60	**180**	
2	Total population	9.3	7.6	6.6	**7.8**	10.9***
3	Extended-family members	2.6	1.8	1	**1.8**	7.2**
	Average number of HH head's					
4	children	4.8	4.0	3.7	**4.2**	2.9
5	sons/daughters in law	.17	.08	.13	**.13**	0.6
6	parents	.07	.02	.03	**.04**	1.1
7	brothers/sisters	.24	.10	.10	**.14**	1.2
8	brothers/sisters in law	.02	.10	.07	**.06**	1.3
9	grandchildren	1.73	1.08	.40	**1.07**	7.85***
10	*Children aged ≤ 6 years* (av.)	1.9	1.8	1.3	**1.7**	6.0**
11	Of which % Head's child	52%	61%	73%	**62%**	2.4
12	% Head's grandchildren	47%	35%	22%	**35%**	3.73*
13	% living without father	39%	33%	21%	**31%**	2.2
14	Children living without father (av.)	.75	.64	.23	**.54**	4.8**

* p<.05 ** p<.01 *** p<.001

Source: own survey results.

We observe that a household in Kisenso is composed of 7,8 members. One fifth of all household members do not belong to the nuclear family which makes up the "centre" of each household. We defined this nuclear family as the family composed of the close relatives of the household head. As is commonly known, whenever the household centre is constituted by a bi-parental nuclear family, the household head is male. This is the case in ca. 90% of all households. Of course, as is commonly known as well, the "typical" African household comprises more than merely the members of a nuclear family, and therefore the fact that almost $1/5^{th}$ of all household members cannot be categorised as members of the nuclear family under-girding a household is not particularly interesting.

The phenomenon of non-nuclear-family-members has been interpreted as a reflection of the previously mentioned sociological importance of the lineage over and above the household. However, the data suggest a more complex reading. There seems to be a close correspondence between the percentage of non-nuclear-family-members and the level of

wealth. If indeed the lineage logic "steers" the allocation of its members among the several "consumption units" it makes up, the outcome seems to be very inefficient: the most impoverished households are also hosting most non-nuclear family members (1/4th of their members), while the richest households host only half of them (12%).

A second set of variables identifies different types of household members in terms of their relation with the household head. There is never a significant difference in the average amount of extended-family members, except in the case of grandchildren. The amount of sons/daughters-in-law, parents, or brother/sisters-in-law, is not only marginal in absolute terms, but also unrelated to wealth –implying that their *relative* weight in the total household population *decreases* in poorer households. Indeed, when we take together variables 5-8 and compare the result with variable 3 (amount of extended-family members), the weight of these types of extended-family members *de*creases from 1/3rd to 1/5th, while in sharp contrast, the relative importance of grandchildren (variable 9) *in*creases from 2/5th to 2/3 (1.73/2.6). In other words, the category of "extended family" hides many subcategories, not all of them corresponding in the same way to a decline in household wealth.

A third set of variables details the category of household members ≤6year. On average only 2/3rd of them are biological children of the household head. This ratio varies from nearly 3/4th to 1/2 as we move from the richest to the poorest tercile ($p<.10$). As can be observed in the table, most "non-nuclear" below-6-year-olds are grand-children. Their percentage increases to over 50% for the category of most impoverished households. The percentage of children "without their biological father living in the same household" evolves in a similar way.

These data would suggest in any case that the specific definition of "solidarity" sustaining a household varies according to the economic position of households. In the richer layers, extended-family members rather conform to the "conventional" idea we have of them: The head's brothers and sisters, his parents, and related in-laws are still relatively important (1/3rd of all extended-family members). Even if in these layers, grandchildren already make up the biggest part of non-nuclear-family members. It can be supposed that to the degree an household impoverishes, the head's children have difficulty starting their own household once grown up, though at the same time this does

not rule out the possibility of having children. As a result, the nuclear family to which the children (≤6 years) belong is "hidden" in the household of one of its parent's parents, and three generations come to live under the same roof. Concomitantly, with impoverishment the probability also increases that children are part of a *mono-parental* (hidden) family.

Table 3. looks at the households from the perspective of the children (< 6 years old) about whom we also have anthropometric data. The table categorises them along some characteristics of their mother and father. It allows us to discuss the family ties on which the household is constructed in more detail.

Table 3. Some characteristics of a child's parents, Kisenso 1997

Relationship of mother with Household-head	#	Civil State of mother				
		Married, Father present	Married, Father absent	Divorced	Widow	Single mother
Wife	109	109	-	-	-	-
Daughter	56	5	21	13	3	14
Daughter-in-law	12	12	-	-	-	-
Sister	1	-	1	-	-	-
Sister-in-law	2	2	-	-	-	-
Head	2	-	-	-	2	-
Mother absent	11	4	7			
TOTAL	**193**	**132**	**61**			

Source: own survey results.

To begin with, it appears that scarcely 56% of all children (109/193, or 61%) are born in families where the mother is married to the household head. This percentage increases to two thirds (128/193) if we add the children belonging to bi-parental but hidden households: most often, this group consists of the head's grand-children. Note that in most of these cases (12 against 5), women live in the family of the father of their child: the "old" principle of viri-locality is still at work. However *only* in the case of bi-parental hidden families: of the (65) women living *de facto* separated from their children's father, the majority live at *their* parents'; only 1 has moved in with her brother, only 2 have

become household head themselves. Only a minority of women do not live in the same household as their child. Though we lack information about them, on the basis of other variables it could be verified that (1) in 7/11 of cases, their father is also absent, and that (2) in 9/11 cases the children are grandchildren of the household head (in 2 cases they live with their widowed father who is household head).

These data generate insight into the ways in which "African solidarity" works at the household-level: in principle and to the outside world, all members of the same lineage are brothers and sisters. Yet, this principle is nuanced in practice. To begin with, though the nuclear-family household is still far from replacing the extended family, contemporary consumption units are built on *vertical* (parent-child-grandchild) rather than *horizontal* family lines. Second, the principle of viri-locality is disregarded in all cases where the mother and the father of the child are *de facto* living separated: children will live at their mother's family as if the father's lineage was not involved. In terms of traditional concepts, approximately one third of all children can be qualified as *uprooted*, as their mothers cease to be *mushika nkunde.*

Table 4. allows to measure the results of the different family configurations in terms of a child's well-being. We opted for the following transformation:

$B_i(\gamma) = 1 - \left|((z_i - 1)/5)^{\gamma}\right|$, with

z_i= weight (in the case of *underweight*) or height (in the case of *stunting*) of a child in comparison with the average child of the same sex and age, in terms of z-scores,
i = type of indicator (weight-to-age or height-to-age)

We consider γ=2 as a reasonable default value. As in the case of the wealth-indicator, we will test the sensitivity of our results to changes in this parameter as well.

Note that the approach chosen differs from the "usual" ones which either posit $B_i = z_i$ or define malnutrition in an all-or-nothing way by specifying a threshold value (usually –2z-scores). Both alternatives do not give due account, if at all, to the non-linear character of the indicator, nor to the fact that there is an optimal nutritional state in-between the extremes of either under- or overnutrition[24].

In the table, a distinction is made between those children whose mother is absent and those whose mother is present. Within the latter group, a distinction is made between those whose father is either living elsewhere or deceased, and those who are living in a bi-parental family (the father is present). Finally, within the latter group, a distinction is made between the children of the family head and those pertaining to "hidden families".

Table 4. Child under-nutrition and family configuration of the household, (Kisenso 1997).

Mother	Father	Child of head ?	# cases	$B_{weight\text{-}for\ age}(2)$	$B_{height\text{-}for\ age}(2)$
Present	Present	Yes	106	.78	.70
		No	20	.79	.74
		Mean Difference (t-test)		-.01 (-.32)	-.04 (-.63)
	Absent		52	.70	.64
	Mean Difference (t-test)			.08 (2.42*)	.07 (1.63*)
Absent			11	.63	.36
Mean Difference (t-test)				.12 (1.82**)	.32 (3.88***)
TOTAL			189	.75	.67

Source: own survey results.

On the basis of the table, we can conclude that the first and most important determinant of malnutrition is the presence of the child's mother in the same household. Her absence implies a decrease in the child's well-being with one fifth in terms of weight-to-age or underweight, and a decrease with almost one half in terms of height-to-age or stunting. Further, the decrease in well-being as a result of the father's presence is statistically significant as well, as it causes the indicators of well-being to decrease by .07-.08 points. Finally, there is no significant difference *within* the group of children whose parents are effectively married: it seems to make no significant difference whether or not the father is also household head.

The table identifies the *de facto* orphans or so-called 'trusted children' as the prime victims of the actual economic crisis. If under-nourishment in general has been fairly low in Kinshasa[25], children growing up with only one or even none of their biological parents appear to constitute an exceptional category. However, it can*not* as yet be concluded from the above table that this is so *because* they are *de facto* orphans. Two alternative causal paths should be considered.

To begin with, we know that higher-aged under-fives are more under-nourished than e.g. the under-one-year-olds, which has clear identifiable causes: breastfed children (usually up to their first birthday) are much less vulnerable to malnutrition[26]. Therefore, if we acknowledge that older children run a higher risk to grow up in a household without either mother or father, the observed differences in nutritional status as presented in table 4. could at least be partly due to differences in the proportion of breastfed children between each of the categories.

Table 5. Relation between age of child and absence/presence of parents, Kisenso 1997

	≤1 year	2-4 years	4-5 years
Mother present			
Father present	74%	68%	61%
Father absent	23%	28%	27%
Mother absent	3%	4%	11%
Total	100%	100%	100%

Source: own survey results.

Table 5. shows that indeed in general the percentage of children with both parents *decreases* as the children grow older. The details reveal some complexities, however. First, most children growing up without their mother are in fact concentrated in the 4-5 age-category. On the basis of what we know about the different variables, we would consequently hypothesise that the relatively high rate of under-nourishment in the category of 4-5 year olds is rather *caused* by the high concentration of mothers in this category than by any other external variable. On the other hand, it appears that the percentage of children growing up without a father is in fact lower in the group of children younger than 1 year, if compared to the other age groups. Given that there are independent causes to explain the relatively high well-being of children below 1, part of the effect of "father absent" as observed in table 4. can thus have been explained by breastfeeding rather than by the absence of the father.

Furthermore, on the basis of table 2. we also deducted that the family configuration can be related to economic wealth: Therefore, *wealth* rather than the child's family status itself would be the 'real' cause of malnutrition.

These questions can only be answered by some type of multivariate statistical analysis. In tables 6. and 7., we summarised the outcomes of several multivariate linear regression models, with respectively well-being based on weight-to-age and height-to-age.

In each case, we reduced the age-factor to a dummy which distinguishes the new-borns ≤14months from other under-fives. The cut-off point of 14 months seemed appropriate given what we know about breastfeeding practices in Zaire-Kinshasa[27].

The first regression model simply introduces the age-dummy. As was to be expected on the basis of what we know about the influence of breast-feeding practices on children's nutritional state[28], new-borns are significantly better-off than older-aged, simply because almost all of them are breastfed. Their well-being is quoted app. .18 points higher than an average child (.71 points), which is not an insignificant result.

Secondly, we introduce wealth: setting the child (α) and scale (θ)-parameters at the default values of respectively .7 and .85. Wealth is significantly related to child well-being, though its direct effect is rather small: an increase in per adult equivalent household income with 100$ increases a child's well-being with only .03 points[29].

In a third step, we introduce two variables which account for the effect of an absent father. The first of them simply presents the effect as an absolute decrease in well-being, the second tests the hypothesis of a "higher-than-normal" effect of wealth on children with an absent father. As a consequence, the significance of the wealth-variable slightly declines, but both newly introduced variables are highly significant as well. The model is capable of explaining 26.3% of the original variation, which is rather much, given the relatively small sample. The problem of multi-collinearity is under control, as judged by the maximum value of the condition index, which stays below 10. As concerns the coefficients, the negative effect of an absent father (-.24) is higher than the positive effect of breastfeeding (+.17). In addition, the effect of poverty on a child's well-being is significantly higher in the case a child's father is absent: if a decrease in wealth with 100$ implies a decrease in well-being with .02 for "normal" children, it implies a decrease with .08 for children whose father is absent.

Table 6. Regression results: determinants of underweight children

#	Parameters of Wealth and well-being indicators			Coefficients of ... (standard error)					Max. C.I.	$R^2_{adj.}$
	γ	α	θ	1	Children ≤14m (dummy yes=1)	Wealth (numeric)	Child without father (dummy yes=1)	Child without father x wealth (dummy yes=wealth)		
1	2	.7	.85	.71***(.01)	.18***(.03)					14.0%
2	2	.7	.85	.59***(.03)	.19***(.03)	.0003***(.0000)				23.1%
3	**2**	**.7**	**.85**	**.64***(.04)**	**.17***(.03)**	**.0002** (.0000)**	**-.24** (.08)**	**.0006**(.0000)**	**8.9**	**26.3%**
Sensitivity-tests of γ, α and θ										
4	2	.5	.85	.65***(.04)	.17***(.03)	.0002** (.0000)	-.25** (.08)	.0006**(.0000)	8.9	26.4%
5	2	1	.85	.70***(.04)	.17***(.03)	.0001 (.0001)	-.29***(.08)	.0007**(.0000)	8.2	23.1%
6	2	.7	.75	.64***(.04)	.17***(.03)	.0002** (.0000)	-.24** (.08)	.0004* (.0000)	9.2	26.1%
7	2	.5	.75	.64***(.04)	.17***(.03)	.0002** (.0000)	-.25** (.08)	.0004* (.0000)	9.2	26.2%
8	2	1	.75	.69***(.03)	.17***(.03)	.0001 (.0001)	-.28***(.08)	.0006**(.0000)	8.4	23.1%
9	2	.7	100	.65***(.03)	.17***(.03)	.0003** (.0000)	-.25** (.08)	.0008**(.0000)	8.4	26.4%
10	2	.5	100	.65***(.03)	.17***(.03)	.0002** (.0000)	-.26** (.08)	.0008**(.0000)	8.4	26.4%
11	2	1	100	.71***(.03)	.17***(.03)	.0001 (.0001)	-.30***(.07)	.001** (.0003)	7.5	22.8%
12	3	.7	.85	.77***(.03)	.13***(.03)	.0002** (.0001)	-.22** (.07)	.0005**(.0003)	8.9	23.9%
13	1	.7	.85	.42***(.04)	.21***(.03)	.0003** (.0001)	-.21* (.09)	.0005* (.0002)	8.9	25.9%
*p<.05 **p<.01 ***p<.001										

Source: own survey results.

Note that we did not introduce variables measuring the effect of a mother's absence: by introducing them, the model was plagued by multi-collinearity, and none of them proved to be significant.

Regression estimates # 4-13 test the sensitivity of model 3's coefficients whenever we change one of the parameters we used to operationalise the wealth and well-being variables. Changes in these parameters do not affect the general result of a significant, independent effect of the father's absence: in the case we counted a child as an adult (α=1), the direct effect of wealth was eliminated. In other words, in this case we would have to conclude that a household's wealth has no *direct* effect on the children's well-being, *unless* the effect of household wealth on the absence or presence of a child's father is incorporated. Further, a change in γ has mainly implications on the coefficients of the constant term and of the age-dummy. The other variables of the original model are only marginally affected.

Table 7. repeats the exercise by opting for height-for-age as the basis to proxy child well-being. Again, we begin by introducing the age-dummy and the numeric wealth variable. Together, they are able to explain ca. 16% of the original variance. Then, we introduced the variables reflecting the mother's absence. Eventually, we only retained a simple dummy, as the composite dummy x wealth was not significant. We also introduced the "father-absent" variables, which resulted in rendering the wealth-variable insignificant: apparently, wealth influences child well-being only in the indirect way (causing the head's daughters to stay at home and have children themselves without being married ceremonially or not). In the final regression model, we eliminated the wealth-variable again. The model is now capable of explaining 24% of the original variance. Wealth seems to be significant only when the child grows up without his or her father. Note also that the coefficients relating the "absent-father"-variables to child well-being are more or less comparable with those of table 6. Note also that the father's presence is more important than the mother's, and both are more important than breastfeeding as determinants of well-being.

Table 7. Regression results: determinants well-being based on height-to-age

#	Parameters of Wealth and well-being			Coefficients of ...						Max. Cond. Index	$R^2_{adj.}$
	γ	α	θ	1	Children ≤14m (dummy yes=1)	Wealth (numeric)	Child without mother (dummy yes=1)	Child without father (dummy yes=1)	Child without father x wealth (dummy yes=wealth)		
1	2	.7	.85	.63***(.02)	.20***(.04)						11.0%
2	2	.7	.85	.51***(.04)	.21***(.04)	.0003**(.0001)				5.0	15.9%
3	2	.7	.85	.54***(.04)	.20***(.04)	.0003**(.0001)	-.298***(.072)			5.1	23.1%
4	2	.7	.85	.60***(.05)	.19***(.04)	.0002 (.0001)	-.282***(.072)	-.248* (.101)	.0006* (.0003)	9.2	25.0%
5	**2**	**.7**	**.85**	**.67***(.02)**	**.18***(.04)**		**-.291***(.073)**	**-.316** (.092)**	**.0007**(.0000)**	**7.0**	**24.0%**
Sensitivity-tests of γ, α and θ											
6	2	.5	.85	.67***(.02)	.18***(.04)		-.287***(.073)	-.326***(.093)	.0007**(.0003)	8.9	26.4%
7	2	1	.85	.67***(.02)	.18***(.04)		-.297***(.072)	-.318***(.092)	.0008**(.0003)	8.2	23.1%
8	2	.7	.75	.67***(.02)	.18***(.04)		-.293***(.073)	-.318***(.094)	.0006**(.0003)	9.2	26.1%
9	2	.5	.75	.67***(.02)	.18***(.04)		-.289***(.073)	-.327***(.095)	.0006**(.0003)	9.2	26.2%
10	2	1	.75	.67***(.02)	.18***(.04)		-.298***(.073)	-.319***(.094)	.0007**(.0003)	8.4	23.1%
11	2	.7	100	.67***(.02)	.18***(.04)		-.289***(.073)	-.308***(.088)	.0010**(.0003)	8.4	26.4%
12	2	.5	100	.67***(.02)	.18***(.04)		-.285***(.073)	-.317***(.089)	.0010**(.0003)	8.4	26.4%
13	2	1	100	.67***(.02)	.18***(.04)		-.295***(.072)	-.312***(.089)	.0010** (.0003)	7.5	22.8%
14	1	.7	.85	.47***(.02)	.18***(.04)		-.242***(.071)	-.278** (.090)	.0007**(.0003)	8.9	23.9%
15	3	.7	.85	.78***(.02)	.16***(.04)		-.293***(.068)	-.314***(.086)	.0007** (.0002)	8.9	25.9%

*p<.05 **p<.01 ***p<.001

Source: own survey results.

Regression estimates 6-15 examine, again, the sensitivity of the results to changes in either α and θ or γ. In general, the results are fairly robust vis-à-vis changes in these parameters. A lower weight for children results in a slightly smaller coefficient of the "father-absent"-dummy. A decreasing importance of scale results in a higher importance of the *wealth x father absent* variable. Changes in γ are reflected most of all in the constant term.

I think it is safe to conclude that a child's state of well-being is affected mostly and independently of other possible interfering variables, by the absence or presence of (one or both) of its parents. Thus, it may be true that this absence or presence is the consequence of poverty. But this poverty does not in itself suffice to explain whether and to what degree a child is malnourished: child malnutrition depends directly on the child's family status rather than on anything else.

V. Further discussion

How can we understand these phenomena ? An important clue can be inferred from the report of some open interviews we organised in some households we had labelled as "poor" during the 1996-survey[30]. Our findings point to what we then called the "centrifugal force of poverty"[31], i.e. the tension poverty created on taken-for-granted social practices we can interpret as expressions of intra-household solidarity.

As a general rule, for instance, it was –and still is- unthinkable to refuse hosting extended family members. However, this supposedly age-old general social norm has been complemented recently by other, secondary norms, defining exceptions to the general rule. For instance, it is by now well-established that a visit should be limited in time. The kikongo proverb that *nsudi nwa kutisana* (in order not to smell the other's bad breath, one has to maintain some distance) is often used in this respect. Another compromise-norm is that guests are expected to bring their food ration with them: hospitality is de facto limited to providing a bed and a roof.

Not only is household-level solidarity hereby *de facto* restricted to the nuclear family members, the pressure of poverty might even induce people to go beyond that level:

"There is not enough food for all of you, you the girls, you have grown-up now, don't the men you meet give you any money ?"[32]

The situation is reminiscent of the classical "lifeboat"-problem, where two men must make a tragic decision about the use of an amount of food which is enough for only one of them[33]. Buridan's ass would perhaps prefer to die instead of deciding to give the food to only one of them. But a *human* decision-maker will rapidly come up with numerous criteria to as to allow him *both* to save his conscience *and* make a "reasonable" choice. The decision to give the lowest priority to grown-up girls in case there's not enough food seems to be such a move. Note however, that from the point of view of established role-expectations, the father's decision is quite revolutionary: a girl's (and women's) place is in the house, not in the streets. Simply wandering around and "meeting men" is "not done", it is equivalent to prostitution. In any case, the decision to urge the girls to let the men they meet pay for them, carries the risks of unwanted pregnancies:

"I have noticed that many families prefer to host the boys, not the girls of other households. They prefer the boys even if they can be wild. But when they make pregnant a girl, it's not the life of the girl of their own family which is wasted (*mwana a bebi*, lit. the girl loses value); The boy isn't wasted, it's the girl. If a girl, hosted by another household, is made pregnant ("wasted"), this creates some problems within the family"[34].

"Wasted" can, and should be interpreted here in several senses. First, the girl's life is wasted, as she cannot proceed with her studies and will probably not attract a husband to care for her. Second, the girl is wasted for the family as she cannot marry and bring bride-wealth into the family. Note that the bride-wealth-argument is not to be underestimated: casewise evidence suggests that bride-wealth easily amounts to an equivalent of 500$ (approximately half the price of the total marriage, to be paid by the groom('s family) as well) and that this price increases in real terms: 500$ is more than average per adult equivalent yearly income! Biaya writes that by migrating to the city and earning a living for herself as a *free woman*, the unmarried rural mother was able to constitute her own bride-wealth, and in this way she could fulfil her dues to her family[35]. Similarly, the urban girl-mother is expected to take care of herself and her children, even if she

continues to sleep at her parents'. This results in the disappearance of one of the most crucial constituents of a household: eating from a common pot.

To conclude, the new economic circumstances have had an ambiguous impact on the maintenance of the social norms and role expectations of family members. First, the norm of unconditional hospitality vis-à-vis extended-family members seems to be eroded by secondary (case-specific) norms. Second, the norm that "girls shouldn't walk freely in the streets" (*kotambola mpamba mpamba*, lit. to wander for nothing for nothing) is simply replaced by emphasising the duties of the men the girls meet. Third and finally, the age-old concept of a "wasted girl" is revived, which results in a further decline of family-based solidarity. The centrifugal force of poverty does certainly not stop at the household's front door. Poverty could be the ultimate cause, but it is the interplay between economic constraints and the existing set of social norms which appears to determine who the ultimate victim is.

Finally, looking at the phenomenon of hidden families from a dynamic perspective, we may observe that the problem of poverty is transferred not only to the girl-mother, but also to a next generation, through the mechanism of under-nourishment. Here, it is important to stress, again, that the low levels of child malnutrition suggest that, in general, the next generation does seem to be remarkably spared by the current economic circumstances. This general observation does not hold, however, whenever current poverty results in hidden families: the mother's current social status provided by the lineage logic seems to be a crucial predictor of the next generation's ill-being.

VI. Conclusion

Since the mid-seventies, postcolonial Kinshasa did not only witness a general collapse of the economic apparatus it inherited from the colonial period[36], this economic evolution was accompanied by several demographic trends as well. Conspicuously among them is the increase in household size and the increase in the number of children pertaining to what Moser called "hidden families". The empirical material we gathered in Kisenso provides more insight into the links between these phenomena.

First of all, the combined effects of a decreasing percentage of married/united adult women and an increase in fertility are reflected in an important category of "natural" children in our survey samples. Approximately 1/3rd of children living in Kisenso are growing up in the absence of a father.

Furthermore, these children grow up in mono-parental *families*, not (necessarily) mono-parental *households*. Usually, the family nucleus of unmarried daughters and their children is "hidden" inside the household headed by the daughter's father. Thus, though the frontiers of *kinois* households typically extend beyond the mere nuclear family, in the contemporary households at Kinshasa the non-nuclear family members are predominantly grand-children. Family-solidarity as observed in the Kisenso survey follows vertical rather than horizontal lines.

In addition, the profile of households hiding the daughter's mono-parental family is more prevalent in poorer households. If we assume that cross-sectional wealth-differences shed some light on inter-temporal wealth differences, we can argue that impoverishment has caused marriages to be postponed or cancelled, with a resulting increase in "hidden" families. On a higher level, this is reflected by increasing household size.

Finally, it has been deducted that children belonging to such mono-parental hidden families are affected twice by adverse economic circumstances. First, most of them grow up in a relatively poor household –which is the most important reason why they grow up in a mono-parental family. Second, they grow up outside a celebrated marriage, which seems to make them even more vulnerable irrespective of the wealth of the household they live in.

A further inquiry suggests that economic regress seems to have altered existing role expectations in several, divergent ways. Some norms, like the one on universal and unconditional hospitality vis-à-vis other members of the lineage, have been eroded by secondary norms. Other norms, like the indication that (especially female) children should not appear "free" in public life, have simply been replaced by others. Still other practices have been reinforced, like the argument that unmarried mothers should repair their transgression by earning their own bride-wealth.

It is the interplay between economic constraints and the set of expected practices which determines the profile of the victims of the contemporary socio-economic turnmoil in Kinshasa. *In casu*, in poor families young girls seem to be squeezed between the necessity to look for male benefactors and the general public's opinion that unmarried mothers are "wasted". Ultimately, we identified the children living in (at best) mono-parental families hidden in the household of their (maternal) grand-father as one of the most conspicuous *victims* of the contemporary turnmoil.

Thus, the Zairian evidence we presented here confirms Moser's hypothesis that economic crisis is translated into, among other things, increasing household size, which is in an important way the reflection an increasing number of hidden, mono-parental families. But while hiding your family into your parents' household may be interpreted as a coping strategy from an individual (female) point of view as well as from an household-efficiency point of view, further analysis indicates that, at least in part, this coping strategy is *also* a mechanism to transfer current poverty to the next generation.

Appendix: measuring household wealth

A detailed discussion on the construction of a good wealth-indicator is presented elsewhere[37]. Suffice it to note, here that (i) we chose to work with expenses rather than income and (ii) we included an imputed rent for house-owners in order to obtain "total household expenses". Further, (iii) we neutralised the effects of varying membership and household scale by transforming total household expenses into wealth as follows:

$$W(\alpha,\theta)_h = \frac{Y_h}{(A_h + \alpha C_h)^{\theta}} \quad ,$$

with

Y_h = total household outlays of household h

A_h = adult members of household h, and

C_h= children (up to 6 years old) belonging to household h,

$0<\alpha<1$ the equivalence factor to express children's consumption in terms of adults' consumption, and

$0<\theta<1$ the factor accounting for economies of scale.

In view of the literature, the most reasonable "default" values of α and θ are .7 and .85 respectively[38]. The final results of our analysis will be tested on their sensitivity to changes in α and θ.

Notes

[1] Caroline O.N. Moser, *Confronting Crisis; a summary of household responses to poverty and vulnerability in four poor urban communities* (ESD studies and monograph series n° 7-8, Washington: IBRD/World Bank, 1996). Caroline O.N. Moser, "The asset vulnerability framework : reassessing urban poverty reduction strategies," *World Development,* 26, 1 (January 1998) : 1-19.

[2] Paul Collier et al. *Labour and poverty in rural Tanzania* (Oxford: Clarendon Press, 1991). Angus Deaton and John Muellbauer, "On measuring child costs: with applications to poor countries," *Journal of Political Economy*, 94, 4 (1986): 720-44,. Jan Hentschel and Peter Lanjouw, *Constructing an indicator of consumption for the analysis of poverty; principles and illustrations with reference to Ecuador* (LSMS Working Paper 124, Washington: World Bank, 1996). Jean Drèze and P.V. Srinivasan, "Widowhood and poverty in rural India: some inferences from household survey data," *Journal of Development Economics,* 54 (1997): 217-34,. John Iceland, "The 'family/couple/household' unit of measurement in poverty estimation," *Journal of economic and social measurement,* 26 (2000): 253-65.

[3] ibid. 1998, p. 13

[4] Guy Standing and G. Sheehan (eds.), *Labour force participation in low-income countries* (Geneva: ILO, 1978). Rodi Wong and R. Levine, "The effect of household structure on women's economic activity and fertility : evidence from recent mothers in urban Mexico," *Economic Development and Cultural Change,* 41 (1): 82-102, 1992.

[5] Jonathan S. Butler and Andrew Horowitz, "Labour supply and wages among nuclear and extended households: The Surinamese experiment," *Journal of Development Studies*, 36 (5): 1-29, 2000.

[6] ibid.

[7] ibid, p. 24.

[8] Tom De Herdt, *Surviving the transition; institutional aspects of economic regress in Congo-Zaire* (Ph.D. dissertation, University of Antwerp, 2000).

[9] Corresponding to sociological reality, there are no female household heads living under the same roof with their partner: in such a case, the partner would be considered household head.

[10] Joseph Houyoux and Niwembo Kinavuidi, *Kinshasa 1975 (*Kinshasa/Bruxelles: Beau/Ichec, 1975), esp. 99.

[11] Tom De Herdt, "Nourrir Kinshasa en période de guerre," [feeding Kinshasa during wartime] *L'Afrique des Grands Lacs Annuaire 2000-2001*, ed. Filip Reyntjens & S. Marysse (Paris: L'Harmattan, 2001) pp. 195-218.

[12] Which is rather low: after making reasonable estimates on the amount of public goods in household-level consumption, we would calculate the decrease in consumption at 22% between 1975-86. Per person consumption decreased with 25% in the same period.

[13] Mark Ram and Rodi Wong, "Covariates of household extension in rural India – change over time", *Journal of Marriage and the Family*, 56,4 (1994): 853-864, Andrew Gage et al., "Household structure and childhood immunization in Niger and Nigeria", *Demography,* 34,2 (1997): 295-309.

[14] Paul A. Samuelson, "Social indifference curves," *Quarterly Journal of Economics* LXX (1): 1-22, esp. 10.

[15] Gary S. Becker, *Accounting for tastes* (Cambridge MA/London: Harvard University Press, 1996). As a consequence, a sharp difference should also be maintained between an essentially local "consensus" about fair allocation and optimal "social welfare" more broadly conceived. In the limiting case, and as we will document for our case, the negotiated consensus on appropriateness may not be more than a thin veil to mask a tragic choice in favour of one and against another household member.

[16] Based on the seminal papers by M.B. McElroy & M.J. Horney, M.J. "Nash bargained household decisions" in: *International Economic Review* 22,2 (1981), pp. 333-49, and M. Mansur & M. Brown "Marriage and household decision making: a bargaining analysis" in: *International Economic Review* 21,1 (1980) pp. 31-44.

[17] Amartya K. Sen, "Gender and Cooperative conflicts" in: Irene Tinker (ed.) *Persistent Inequalities* Oxford: Oxford University Press (1990), pp. 123-49, esp. p. 136.

[18] Amartya K. Sen, *op.cit.*.

[19] Wyatt MacGaffey, "Lineage structure, marriage and the family amongst the central Bantu," *Journal of African History,* 24,2 (1983): 173-87. Paul Collier and Jan-Willem Gunning, "Explaining African economic performance", *Journal of Economic Literature*, XXXVII (March 1999): 64-111.

[20] Jean S. La Fontaine, "The free women of Kinshasa," *Choice and change ; essays in honour of Lucy Mair* ed. John Davis (New York : Humanities Press, 1973) : 19-113. Gertrude Mianda, *Femmes africaines et pouvoir; les maraîchères de Kinshasa* [African women and power; swamp production in Kinshasa] (Paris: L'Harmattan, 1996).

[21] See also René Devisch, weaving the threads of life; The Khita Gyn-Eco-Logical healing cult among the Yaka (Chicago: University of Chicago Press, 1993).

[22] Tamas K. Biaya, "Mundele, Ndumba et Ambiance; Le vrai 'bal blanc et noir(e)'," in: *Belgique/Zaïre: une histoire en quête d'avenir* ed. G de Villers, (Bruxelles/Paris: CEDAF /L'Harmattan, 1994): 91-2.

[23] Biaya, ibid., La Fontaine, ibid, Tom De Herdt, "Economic action and social structure: 'Cambisme' in Kinshasa," *Development and Change* 33, 4 (September 2002): 683-708.

[24] Tom De Herdt, *Surviving the Transition.*

[25] Tom De Herdt and Stefaan Marysse, "Against all odds: coping with regress in Kinshasa (Zaire)," *European Journal of Development Studies,* 9,1 (2001): 209-301.

[26] Tom De Herdt, *Surviving the Transition.*

[27] UNICEF, *Enquête nationale sur la situation des enfants et des femmes au Zaïre en 1995* [National survey on the situation of children and women in Zaïre in 1995] (Kinshasa : République du Zaïre, 1996).

[28] UNICEF, ibid.

[29] In order to interpret this result, it may be interesting to repeat that well-being is measured on a scale from 0 to 1, and that average well-being in the zone surveyed is 0,74.

[30] Laurent Luzolele and Tom De Herdt *La pauvreté urbaine en Afrique Subsaharienne; le cas de Kinshasa* [Urban poverty in Sub-Sahara Africa ; the case of Kinshasa] (Kinshasa: CEPAS, 1999).

[31] Laurent Luzolele and Tom De Herdt, ibid. p. 43.

[32] Laurent Luzolele and Tom De Herdt, ibid. p. 53.

[33] Partha Dasgupta, ibid, p. 30.

[34] Laurent Luzolele and Tom De Herdt, ibid. p. 57.

[35] Tamas K. Biaya, ibid, p. 94.

[36] Tom De Herdt and Stefaan Marysse, ibid.

[37] Tom De Herdt, *Surviving the Transition*.

[38] Jean Drèze and P.V. Srinivasan, ibid.