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THE TIME-PRESSURE ILLUSION: DISCRETIONARY TIME VS. FREE TIME

ABSTRACT. People's welfare is a function of both time and money. People can – and, it is said, increasingly do – suffer time-poverty as well as money-poverty. It is undeniably true that people feel increasingly time pressured, particularly in dual-earner households. But much of the time devoted to paid and unpaid tasks is over and above that which is strictly necessary. In that sense, much of the time pressure that people feel is discretionary and of their own making. Using data from the 1992 Australian Time Use Survey, this paper demonstrates that the magnitude of this 'time-pressure illusion' varies across population groups, being least among lone parents and greatest among the childless and two-earner couples.

INTRODUCTION

Being 'money poor' is a familiar phenomenon, a simple matter of not having enough money to meet one's needs in any of the many ways those might be specified. Being 'time poor', by analogy, is a matter of not having enough time to do all the things one has to do (Vickery, 1977).

It is said to be an increasingly common phenomenon in modern societies. There is some controversy over whether time in paid labour is actually increasing or not.[2] But there is little doubt that total time spent in paid and unpaid household labour is increasing overall, as increasing numbers of working women and dual-earner couples more generally put in a 'second shift' at home after a full day in paid labour.[3] Even the US President's Council of Economic Advisers (1999) has agreed that the 'time crunch' is real.

The conventional way to measure 'time pressure' is simply to look at how many (or few) hours of 'free time' are left to people. That is

conventionally defined as the amount of time left to them, after deducting the number of hours they actually spend in unavoidable activities of daily life: paid labour; unpaid household labour; and personal care (eating, sleeping, grooming and so on).

That basic methodology is fundamentally flawed, however. Those activities themselves may be necessary, in the sense that they represent things that must get done. But people may nonetheless spend more time than strictly necessary doing them, or achieve more in those realms than strictly necessary. It is necessary to spend some time sleeping and some time earning money; but most people get more sleep and earn more money than the minimum that is strictly necessary. Just looking at how much or little time people have 'left over' might therefore be a good way of assessing whether they are 'overworked', in some sense or another (Schor, 1991). It is not, however, a good way of finding out whether they are genuinely 'time poor'.

For assessing 'time-poverty', we have to distinguish how much time people *actually* spend on the necessary activities of daily life from how much time they strictly *need* to spend on them. Consider this analogy to ordinary poverty research: imagine a spendthrift millionaire, who chose to spend all of her millions and more on the fanciest of food, clothing and shelter; the fact that she has chosen to spend all her money that way, and now has nothing left over, does not make her 'poor' (Ringen, 1988). So too should the notion of time-poverty be defined, not in terms of how people actually spend their time and how much they actually have left over, but rather in terms of temporal necessities: what time people strictly need to spend, compared to what they have available to spend.

Here we seek to specify those crucial variables: how much time it is strictly necessary for people in various social circumstances to spend in unavoidable activities of paid and unpaid household labour and personal care. We dub the residual – what is left over after those necessities have been met – 'discretionary time'. That represents the amount of time that is potentially available to people to do with as they please.

In practice, of course people tend to commit some (often lots) of their discretionary time to achieving more than strictly necessary in each of those dimensions. They work longer than necessary merely to escape poverty; they spend more time in unpaid household labour and personal care than strictly necessary to keep themselves and their households up to minimally acceptable social standards. That is to

say, they choose to spend some of their discretionary time in these ways: and there is no reason they should not do so.

Our point is just this: When they feel time pressured in consequence, it ought be recognized that that pressure is of their own making, a consequence of choice rather than necessity. This difference between how much (or little) actual 'free time' people have left over outside paid and unpaid labour and personal care, and how much 'discretionary time' they actually had, we dub the 'time-pressure illusion'.

As we shall show, the amount of discretionary time actually available to people varies considerably depending on their circumstances. So too does the 'time-pressure illusion', thus defined. In general, those people who have the least discretionary time are under least illusion. That is the case with lone parents, mothers especially. At the other extreme, those people whose time commitments leave them with the least actual 'free time' are in general not especially short of potential 'discretionary time': they are under the greatest time-pressure illusion. That is the case with dual-earner couples, especially those without children.

THE 1992 AUSTRALIAN TIME USE SURVEY

We develop our arguments by reference to data contained in the 1992 Australian Time Use Survey.[4] Among time-use researchers, Australian Time Use Surveys are generally regarded as constituting one of the 'gold standards', methodologically (Stinson, 1999). But that apart, there is no reason to think that there is anything distinctive about these Australian data. Precise estimates of free and discretionary time will vary from country to country, of course. The general points we will be making here by reference to those data should nonetheless be broadly applicable across the OECD world (Goodin et al., 2004).

The 1992 Australian Time Use Survey was a diary-based exercise conducted by the Australian Bureau of Statistics (ABS), involving 7056 persons aged 15 years and older. Our main aim here, however, is to assess the time pressures created by the conjunction of paid and unpaid household labour; so we confined our analysis to cases of households where both the head of the household and the spouse (if there was a spouse) were of 'prime working age', 25–54 years of age.[5] To avoid complications about how responsibilities for income and

housework might be shared in more complex households, we also confined our attention to nuclear one-family households.[6]

Respondents were asked to record in a diary what they were doing, indicating beginning and ending points of each activity within 5 minutes.[7] If they were doing several things at once, respondents were asked to specify their 'main activity' and 'what else they were doing'; here we confine our attention to 'main activity' codes alone.[8] Respondents were asked to describe their activities in their own words, which were then coded by the ABS into ten major categories (which we further collapse, as discussed below). Respondents were also interviewed to obtain background information on their age and sex, employment, education, income and so on. Diaries were kept for two consecutive days.[9] Care was taken to ensure equal representation of each day of the week and each quarter of the year.

ACTUAL 'FREE TIME'

Time-use studies collect information from people about how they use their time, coding their reports into various categories. The methods of collection vary, as do the labels of the categories. But the substantive distinctions separating the categories are by now standard (Sorokin and Berger, 1939; Szalai et al., 1972; Robinson, 1977, 1985; Andorka, 1987).

One category is 'time spent in paid labour'. A second category is 'time spent in unpaid household labour' – cooking, cleaning, child-minding and the physical care of children, shopping and so on.[10] A third category is 'time spent in personal care' – eating, sleeping, grooming and so on. These categories are now utterly conventional in time-use studies, and here we simply take them as given.

Time spent in those three sorts of activities – paid labour time, unpaid household labour time and personal care time – collectively comprise time that is committed to what might be called 'obligatory' activities (Robinson, 1977, ch. 3).[11] The rest of one's time is conventionally called 'free time'. That 'free time' is simply 'the time left over' after the activities in those other three categories (Robinson, 1977, ch. 4; Andorka, 1987, p. 151).[12]

'Free time', as conventionally defined, is thus the residual that remains after taking account of time that people have actually

committed to 'paid labour', 'unpaid household labour' and 'personal care'.

Those latter three variables are simply read off the 1992 Australian Time Use Survey data, combining subcategories in standard ways to form those three aggregate variables.[13] Table I reports – on the first, non-italicized line under each heading – the average (mean) amount of time actually spent in each of those activities by men and women in different household types.

It is well known from the time-use literature that unpaid household labour, in particular, varies substantially between men and women and depends heavily on whether or not they have children and whether or not both partners are in paid labour.[14] In Table I we therefore report the mean amount of time actually spent in each activity among heads of households and their spouses, broken down according to gender and household structure (one-adult vs. two-adult households; one-earner vs. two-earner households; households with and without children).

In Table I, total actually uncommitted 'free time' ranges from a low of 32.51 hours a week (for women in two-earner households with children) to a high of 49.91 hours a week (for women in childless, two-adult, one-earner households). Sometimes it is men who have more actually uncommitted 'free time' than women, sometimes (as in two-adult, one-earner households) it is women; but only occasionally are the gender differences large. People in households without children almost invariably have much more uncommitted 'free time' than people in households with children.[15]

Much the most striking feature of the 'free time' findings in Table I, however, is the fact that people in two-adult, two-earner households have systematically less actually uncommitted 'free time' than people in either of the other household types. That is true whether they are women or men, and whether they have children or not.[16]

That finding is of course familiar to followers of the time-use literature. But on the face of it, this should still be surprising. Of course, it is no surprise that two-earner couples might enjoy less 'free time' than one-earner couples: two earners devote more time to paid labour than does one, after all. Naively, however, we should surely expect 'free time' to be lowest of all among lone parents, who have to do all the household's paid work and all the household's unpaid work all by themselves, without a partner to help.[17] It is thus genuinely surprising

TABLE I

Time commitments, actual vs necessary (mean hours per week)

	Households with no children		Households with children	
	Male	Female	Male	Female
Two-adult, One-earner Households				
Committed time				
Time in paid labour				
Actual	29.59	10.88	44.16	3.46
Necessary	*9.31*	*6.28*	*24.44*	*4.02*
Time in unpaid household labour				
Actual	20.47	34.35	18.66	52.88
Necessary	*6.27*	*11.49*	*10.41*	*32.10*
Time in personal care				
Actual	70.00	72.87	68.74	70.66
Necessary	*57.87*	*57.87*	*57.87*	*57.87*
Uncommitted time				
(168 hrs/wk minus all of above)				
Actual ('free time')	47.94	49.91	36.43	41.00
Potential ('discretionary time')	*94.55*	*92.37*	*75.28*	*74.02*
Time-pressure illusion				
(Potential minus actual uncommitted time)	46.61	42.46	38.85	33.02
$N=$	50	50	290	290
Two-adult, Two-earner Households				
Committed time				
Time in paid labour				
Actual	51.21	40.29	47.95	26.78
Necessary	*6.56*	*6.52*	*14.65*	*8.86*
Time in unpaid household labour				
Actual	14.53	22.34	19.78	40.04
Necessary	*6.54*	*11.22*	*13.14*	*28.26*
Time in personal care				
Actual	67.31	70.73	66.12	68.66
Necessary	*57.87*	*57.87*	*57.87*	*57.87*
Uncommitted time				
(168 hrs/wk minus all of above)				
Actual ('free time')	34.95	34.64	34.14	32.51
Potential ('discretionary time')	*97.04*	*92.39*	*82.35*	*73.01*

TABLE I

Continued

	Households with no children		Households with children	
	Male	Female	Male	Female
Time-pressure illusion (Potential minus actual uncommitted time)	62.09	57.75	48.20	40.50
$N =$	126	126	316	316
One-adult, One-earner Households				
Committed time				
Time in paid labour				
Actual	46.22	39.48	34.46	38.30
Necessary	*8.20*	*11.65*	*10.43*	*23.39*
Time in unpaid household labour				
Actual	14.38	18.44	16.72	29.21
Necessary	*5.28*	*5.28*	*19.83*	*25.75*
Time in personal care				
Actual	66.96	67.74	69.44	67.82
Necessary	*57.87*	*57.87*	*57.87*	*57.87*
Uncommitted time (168 hrs/wk minus all of above)				
Actual ('free time')	40.45	42.34	47.38	32.67
Potential ('discretionary time')	*96.65*	*93.20*	*79.87*	*60.99*
Time-pressure illusion (Potential minus actual uncommitted time)	*56.20*	*50.86*	*32.49*	*28.32*
$N =$	81	75	7	67

that both men and women, and both those with and without children, have less 'free time' in two-earner couples than in *any* other household type.

CONCEPTUALIZING POTENTIAL 'DISCRETIONARY TIME'

Up to this point, we have been using the standard time-use categories straightforwardly to measure how much time people have 'free', net

of the time they actually devote to the various obligatory activities of paid and unpaid household labour and personal care. Now we turn to the more innovative task of suggesting how those same standard categories can be adapted to measure how much time people *need* to spend in each of those activities.

There has been surprisingly little previous discussion of how much time people should, or need to, spend on the unavoidable tasks of daily life.[18] Your mother may have told you that you need 8 hours of sleep a night; but both folk wisdom and learned disquisitions have varied wildly over the past several centuries on this score (Ekirch, 2001). Trade unions have long campaigned for the 40-hour work week as an upper limit on paid labour time (ILO 1935/1996), but they have never specified any minimum hours (as opposed to wages) that might be necessary. How much time needs to be spent in various unpaid domestic tasks is generally left up to negotiations between partners within each household, with little discussion across the wider community.

Here we address those issues head-on. We propose certain standards for how much time it is strictly necessary for people to spend in the three unavoidable activities of daily living: paid labour, unpaid household labour and personal care. 'Necessity', by its nature, refers to bare essentials. Accordingly, our estimates of 'necessary time' in each of these dimensions will be deliberately conservative.

We begin with the least controversial of those three: the amount of 'necessary time in paid labour'. Here, the 'bare minimum' – the 'least you can get by with' – is putting in enough paid hours to get your income up to the poverty line. Of course, most people *choose* to work more than that; but that is up to them, if that is how they choose to spend their 'discretionary' time. Earning a poverty-level income is what should be regarded as strictly 'necessary', in terms of how much time people strictly *have* to put into paid labour.

Hence we define:

'necessary time in paid labour' = the amount of time necessary, at what would be that individual's wage rate when working that many hours, to earn a poverty-level income

'Poverty' we define in the usual way, as one-half the median equivalent income across the country.[19] Thus 'necessary time in paid labour' is indexed to the country in which one lives (as are measures suggested below of 'necessary personal care time' and 'necessary time in unpaid household labour'). 'Equivalent income' is an individual's

pro-rata share of total household income, adjusting for the economies of scale associated with larger households. For simplicity, we use the square root of the number of individuals in the household as our equivalence scale, dividing that into the total household income to get the equivalent income to be assigned to each individual within that household.

This indicator of 'necessary time in paid labour' is not altogether unproblematic. For a start, it is subject to all the familiar controversies surrounding any poverty calculation.[20] A further problem, more specific to this application, lies in calculating what a person's wage rate would be, if s/he worked fewer (or more) hours than s/he actually works at present. Many economic analyses simply assume that it would be exactly the same.[21] But we know that that is not right: wages and hours worked are often linked to each other (Lundberg, 1985).

Anecdotally, you simply cannot be a corporate lawyer for 3 hours a week; the job is 50-hours-a-week or nothing. Likewise production-line workers cannot choose to alter the lengths of their shifts. So people would often have to change jobs, in order to work substantially different hours than they do at present. Still, even if people could not necessarily stay in exactly the same job and just do it for more or fewer hours, the same characteristics they bring to one job could often be used in another with differing temporal demands but similar remuneration.

The first question to address here is whether there are such jobs available at all – whether people could find suitable work (work suited to their skills), in which they worked substantially different hours than they do at present.[22] We addressed this issue, in a rough-and-ready way, by doing a cross-tabulation of wage rates and number of hours worked per week. Each cell in that table, within the relevant range, seemed suitably populous. From that we infer that there are jobs out there, in which people really could work the sorts of hours we (judging from Table I's report of 'necessary time in paid labour') envisage as 'necessary'.[23]

Given that wage rates and hours worked are often intertwined, we must then address the second question of what your wage rate would actually be if you worked substantially fewer (or more) hours than you do at present. We explored that issue by fitting an ordinary least-squares equation to wage-rate data, predicting a person's wage rate

on the basis of number of hours in paid labour and a range of or-
dinary human-capital and other characteristics. This analysis will be
discussed in more detail in Section 'Measuring Potential, "Discre-
tionary Time" below. But the basic idea is that, from that equation,
combined with facts about the individual's circumstances (current
wage rate, current number of hours in paid labour, human capital
and other characteristics), we can predict what that individual's wage
rate would be when working the (typically, many fewer) hours
required just to achieve a poverty-level income. That 'adjusted wage
rate' is then used in subsequent analyses.

When it comes to calculating 'necessary time in personal care' and
'necessary time in unpaid household labour', there is no general
consensus, analogous to the scholarly (and indeed intergovernmental)
consensus on the 'poverty line' for money, from which we can
straightforwardly adduce how much time it is necessary for people to
spend on those activities. There, measures of what is 'necessary' have
to be constructed from scratch.

Presumably, the 'necessary' here should be defined somehow by
reference to the actual distributions – just as, when specifying a
poverty line in the dimension of money, what income is deemed
'necessary' is defined in terms of the actual distribution of income
(specifically, as half the median). But we cannot, with time as we do
with money, simply take 'half the median' as marking bare necessity.
Time, unlike money, is upper- as well as lower-bounded: everyone has
only 24 hours a day to allocate; no one can spend more than 24 hours
a day on any activity or combination of activities. Taking as our
poverty line half the amount of time that the average person spends
on an activity would yield implausible estimates, in consequence (for
example, that people 'need' only 5 hours a day to eat and sleep: which
is ridiculous).

What we are looking for is some 'lower bound' – some inflection
point in the frequency distributions – below which relatively few
people seem to fall. That lower bound of 'necessity' should obviously
not just be the least that anyone does. To specify it that way would be
to define time-poverty out of existence (like defining money-poverty
out of existence by defining the poverty line as equal to the least that
anyone in the country earns: politically convenient, but obviously
absurd). Equally obviously, 'necessity' should not just represent the
'average', but rather the least you can 'decently get by with'. (Having

half the population doing less than necessary, by definition, would be a distinctly odd sense of 'necessity'.) Just thinking of the people we know well, clearly some spend lots more time in such activities (like grooming or sleeping or cooking or cleaning or whatever) than is strictly necessary, while others clearly spend lots less time than they really should by any objective standard.[24]

In stipulating how much time is 'necessary' to spend on those unpaid activities of daily life, we are therefore looking for a cutting point somewhere in the bottom half of the distribution. Here we define 'necessary' as the 'mean minus one standard deviation' in the amount of time that people actually spend, in 'unpaid household labour' and 'personal care' respectively.[25] That represents, for us, the minimum amount of time it is strictly necessary to spend on each of those activities.

Thus, we define:

'necessary personal care time' = mean 'personal care time' minus one standard deviation in 'personal care time'
Analogously, we define:

'necessary unpaid household labour time' = mean 'unpaid household labour time' minus one standard deviation in 'unpaid household labour time'

Those values fall in the bottom half of the distribution, as we intuitively suppose they should. Whether they fall at exactly the 'right' place there is something that can only be assessed impressionistically in relation to the actual data. On the basis of the 1992 Australian Time Use Survey data, though, those estimates seem highly plausible.[26]

'Necessary personal care time' and 'necessary time in unpaid household labour', thus defined, are 'relative' rather than 'absolute' indicators of what is necessary. How much it is thus deemed necessary for you to do is a function of how much other people in your society do, as specified by the mean and standard deviation in those distributions. Note, however, these 'necessary time' indicators are no more relative in this respect than is the standard 'necessary money' specification of the 'poverty line' as half the average (there, median) equivalent income across the population. Also note that, if there is some absolute necessity involved – as for example the physiological need for sleep – then that should show up through our procedures as

low variation (small standard deviations) on that measure (as indeed we observe, in the case of 'personal care time').

Everyone has to sleep and eat and bathe, whether they have a dozen kids or live alone. So necessary personal care time will be assumed not to vary according to household structure: it is just the mean minus one standard deviation across the sample.[27] But it is obvious that we must index 'necessary unpaid household labour time' to household structure. If you live on your own, there is less that needs to be done (but there is also no one with whom to share the tasks). If you live in a large family, there is much more that needs to be done.[28]

Finally, in calculations of how much time is necessary in both paid and unpaid household labour, we must be sensitive to the fact that the household's requirement pertains to the aggregate supply across the whole household. The necessities in view are things that need to get done – money raised, meals cooked, diapers changed – by someone or other in the household. But those are things that, if one person in the household does them, others need not. This points to the crucial importance of looking at 'necessary labour' and 'necessary unpaid household labour' from a household perspective.[29]

Our notion of 'discretionary time' – time available to people to 'do with as they please' – consists of time left to them after life's necessities have been taken into account (personal care, paid work and unpaid household labour). Thus, our basic definition of 'discretionary time' is:

'*discretionary time*' = 168 hours/week (or 24 hours/day)

minus 'necessary personal care time'

minus 'necessary time in unpaid household labour'

minus 'necessary time in paid labour'

Like actually uncommitted 'free time' in the standard time-use literature, our potentially uncommitted 'discretionary time' is a residual notion. Unlike 'free time', it is not the residual left over after people have done all that they actually choose to do in all these dimensions. Instead, it is the residual left over after they do the minimum they need to do in all these dimensions.

That notion of 'discretionary time' is a measure of 'resource autonomy', in the first instance (Goodin et al., 1999, pp. 34–36, 222–235). That is to say, it is an indicator of the amount of time over which people have full control, free choice of how to spend it.[30]

MEASURING POTENTIAL 'DISCRETIONARY TIME'

Calculating 'discretionary time', thus defined, requires us to estimate three variables: 'necessary time in paid labour'; 'necessary time in unpaid household labour'; and 'necessary personal care time'. That will now be done in the ways just described, using the 1992 Australian Time Use Survey.

To estimate 'necessary personal care time' – how much time is strictly necessary for sleeping, eating, grooming and so on – we begin by noting how much people actually spend on those activities, as in the first, non-italicized row under 'time in personal care' in Table I. Across the sample of prime-aged heads of households and their spouses, the average (mean) amount of time spent on these activities was 69.60 hours a week, with a standard deviation of 11.73.

Following the procedures set out above, we thus reckon 'necessary personal care time' to be the mean less one standard deviation of that distribution, or 57.87 hours per week. We thus assign that value to everyone in the second, italicized row under 'time in personal care' in Table I.[31]

'Necessary paid labour time' is defined above in terms of how long people would have to work to achieve a poverty-level income. We calculate the 'poverty line' as discussed above for the entire sample (here, and only here, including respondents of all ages), basing our calculations on income as reported in the 1992 Australian Time Use Survey.[32] We then calculate how much income would be needed by each household to escape poverty by multiplying that individual-level poverty line by the square root of the number of members of that household (the equivalence scale we used in constructing the poverty line). That represents the amount of income needed by the household in order to avoid poverty.

To determine how long people in the household would have to spend in paid labour to earn that much money, we first calculated their actual wage rates, simply by dividing their reported weekly

income by their reported hours of work.[33] We then adjusted that wage rate by reference to a wage-rate equation as described above, to reflect what a person's wage rate would be when working that different number of hours. To estimate that equation, we needed a much larger sample size than was available in the Time Use Survey; so we turned to the Income and Housing Costs Survey conducted by the ABS in 1990 (the nearest one to the 1992 Time Use Survey).[34] We fitted an ordinary least-squares equation predicting a person's wage rate on the basis of number of hours in paid labour and a range of ordinary human-capital and other characteristics.[35] From that equation, we then derived a prediction as to what that person's wage rate would be if s/he worked just long enough to achieve a poverty-level income, taking into account the actual wage rate s/he is getting at present for the actual number of hours s/he is working at present.

In households with only one wage-earner, the amount of 'necessary time in paid labour' for that sole earner is simply the amount of money the household needs to escape poverty, divided by that sole earner's wage rate adjusted as above.[36] In households with two wage-earners, we apportion necessary paid labour responsibilities between earners in proportion to their actual incomes. Thus, we determine what proportion of the household's total actual income is contributed by the head of the household and the spouse respectively; we determine how much total income the household needs to escape poverty; and we then assign each wage-earner responsibility for earning the same share of that sum as each presently contributes to total household income.[37] How much time it is necessary for each wage-earner to spend in paid labour is that sum, divided by that person's own wage rate – again, adjusted as above in light of that wage-rate equation to reflect what his or her wage rate would be when working that different number of hours.

Finally, we add to these estimates adjustments to take into account necessary breaks at work and necessary travel time to work. Sensitivity analysis suggests that omitting these variables altogether or specifying them in alternative ways does not make any appreciable difference to the results reported below. Still, for the sake of completeness these variables ought be included.

As regards breaks at work, we assume, as a rough approximation, that those are proportional to the number of hours being worked. Mean actual time in breaks at work is, in the 1992 Australian Time

Use Survey, 4.30% of mean actual time literally in paid labour.[38] Thus, we multiply 'necessary time in paid labour' as calculated above by 0.0430 to get 'necessary breaks at work'.

Travel time to work, on the other hand, is more lumpy than time in breaks at work. It is a function of the number of journeys to work, rather than the amount of time you spend at work once you get there. We assume that the number of strictly necessary days at work during the week, given 'necessary time in paid labour' as calculated above, is equal to the number of days at work that would be necessary if paid labour was concentrated into standard 8-hour work days. (That is the minimum number of days at work that is strictly necessary, in keeping with our general attempt to define 'necessity' conservatively as the bare minimum.) We calculate 'necessary travel time to work' by multiplying the number of strictly necessary days at work by the mean actual travel time to work during work days, which is 0.5720 hours (or 34.32 minutes) per work day.

We add together 'necessary time in paid labour' as calculated above, 'necessary breaks at work' and 'necessary travel time to work' to get the grand total of 'necessary time in paid labour', including breaks at work and travel time to work. That number is entered on the second, italicized line under 'time in paid labour' in Table I.

How much 'necessary unpaid household labour time' must be performed in any given household is, as discussed above, set at the 'mean minus one standard deviation' of the amount people actually do.

As evident from the first, non-italicized row under 'time in unpaid household labour' in Table I, the amount actually done varies with household structure – and necessarily so, at least as regards the time costs of extra members of the household. We therefore calculate 'necessary unpaid household labour time' separately for households of different sizes, as reported in Table II.[39]

The standard deviations in unpaid household labour time are high relative to the means, certainly much higher than in the case of personal care time reported above. But this is unsurprising. After all, 'personal care' – eating and sleeping, showering, brushing your teeth and so on – is something that everyone has to do every day. Hence, time-use studies based on diaries kept over one or two days inevitably catch everyone doing those sorts of things; and the standard deviation in time spent on those activities is correspondingly small. Some aspects of 'unpaid household labour' are daily activities broadly like

that (cooking and caring for the children, for example). Others however clearly are not (weekly grocery shopping, the weekend laundry, the annual spring cleaning). Daily time-use diaries will inevitably catch some people doing once-a-week (or once-a-year) unpaid household tasks, making the standard deviation there much higher. Still, assuming that the number of hours spent in each of those activities is roughly normally distributed across the population – which is the case with respect to time spent in unpaid household labour as well as personal care – roughly the same proportion of the population (15.87%) will lie one full standard deviation or more below the mean, regardless of how large or small that standard deviation is relative to the mean.

In one-adult households, we simply assigned the relevant value from Table II as the 'necessary unpaid household labour time' to be done by the sole adult in the household. That assumes (as we shall similarly assume in the case of other households as well) that full responsibility for all the *necessary* unpaid household labour falls to the adult member of that household, and to her or him alone. Undoubtedly, children – particularly older children – do perform useful chores around the house. Our assumption is merely that it is the adult(s) in the household who bears ultimate responsibility for seeing to it that all strictly necessary tasks are performed in the running of the household.

In households with two adults, we apportion necessary unpaid household labour responsibilities between them in proportion to the amount of unpaid household labour they actually do. That is to say, for each household, we first determine how many total hours of unpaid household labour are being done by all the adults in the household, and what proportion of that total each adult is presently contributing. We then assign to each adult an amount of 'necessary unpaid household labour time' that corresponds to the same proportion of the total necessary for that person's household as a whole, as given in Table II.

'Discretionary time' is just what is left over, after all three types of 'necessary time' have been deducted. To calculate the mean amount of 'discretionary time' available to people in each sort of household, we simply deduct from the total number of hours in a week (168) the number of 'necessary hours in paid labour', 'necessary hours in un-paid household labour' and 'necessary hours in personal care'.

TABLE II

Necessary unpaid household labour time, by household size

Number of people in household	Time in unpaid household labour (hrs/wk)		
	Actual		Necessary (mean minus standard deviation)
	Mean	Standard deviation	
1 person	17.91	12.63	5.28
2 people	41.70	23.94	17.76
3 people	59.11	26.84	32.27
4 people	69.13	26.66	42.47
5 people	73.81	26.02	47.79
≥ 6 people	84.04	29.99	54.05

The results of these calculations are presented in the second, italicized row of Table I under 'uncommitted time'. Potential 'discretionary time' as reported there ranges from a low of 60.99 to a high of 97.04 hours a week. Men have more potentially uncommitted 'discretionary time' than women across all household types (by a wide margin, though, only in lone-parent or two-adult, two-earner households with children). People in households without children invariably have very much more 'discretionary time' than those in households with children.

In the first, non-italicized row under 'uncommitted time' in Table I, two-earner couples are the ones who enjoy systematically less actually uncommitted 'free time' than all others. In the second, italicized row, in contrast, lone mothers are the ones who are particularly short of 'discretionary time', with mothers in the two other household types scoring almost-equal next lowest. Single people without children usually have a little more 'discretionary time' than their counterparts in childless two-adult households. Significantly, however, people in two-earner couples – who seem so short of actual 'free time' – have about as much potentially uncommitted 'discretionary time' as (and in the case of men, systematically more than) their counterparts in other household types.

THE TIME-PRESSURE ILLUSION

Comparing the results of those two previous sets of calculations allows us to assess the extent to which the time pressures people are under are the products of 'choice' or 'necessity'.

The extent of the 'time-pressure illusion' is simply the difference between means of potentially uncommitted 'discretionary time' and actually uncommitted 'free time' for each group. That statistic is offered as an indicator of the extent to which people have chosen to devote more of their time than strictly necessary to the unavoidable tasks of paid labour, unpaid household labour and personal care. Those results appear as the last rows of each block in Table I.

Two comments are in order, before discussing those findings. One concerns the extent to which people really have a 'free choice' over how much extra time to devote to those tasks. There may be reason to doubt that, at both the micro and macro levels. At the micro level, any particular individual is always in some very particular circumstances. People with serious illnesses may need to sleep longer than others; people with disabled children may need to spend more time in unpaid caring labour than others; some people with inflexible jobs and few employment options might have to work lots of hours in order to remain in paid work at all. But those are just the sorts of personal idiosyncrasies that talking in terms of 'means' is supposed to wash out. At the macro level, one might suppose that there are 'social expectations' constraining people's choice to devote very much less time than they actually do to those tasks. But those are just the sorts of social norms that are supposed to be captured by indexing our standards of what is 'necessary' in each dimension to the average (mean or median) of what is actually observed, give or take a standard deviation.

A second issue concerns the appropriateness of the term 'illusion' in this context. In one sense, the time pressure that people are actually under is not at all an illusion. They actually are working, cooking and sleeping all those hours; they really do have only that much free time actually left over. What is illusory is merely the sense of 'pressure' – the suggestion that they were 'forced' to do all those extra hours, above and beyond what was (by our standards) necessary. In another sense, too, the use of the psychologized term 'illusion' is slightly out

of place in the present context. We have no data on people's subjective mental states: just on their objective time commitments. Hence, strictly speaking, we are dealing here with 'grounds' for illusion – with how much free time people would have left over after doing what is minimally necessary in the unavoidable tasks of daily life. Whether those objective facts give rise to a subjective sense of being under time pressure is something that cannot be answered using the 1992 Australian Time Use Survey.[40]

Let us now turn to examine the evidence on the extent of the 'time-pressure illusion' in the bottom rows of Table I. What we see there is that the 'time-pressure illusion' is greater – by wide margins – for people in childless households than for those in households with children. People in two-adult households without children devote between 42.46 and 62.09 more hours a week to paid and unpaid household labour and personal care than they strictly need to; and people in one-adult households without children fall around the middle of that same range. In two-adult households with children, the time pressure is less illusory. People there actually devote only 33.02 to 48.20 more hours a week than necessary to those tasks. And for lone parents, the time pressure is still less of an illusion. They actually devote only between 28.32 and 32.49 hours a week more than strictly necessary to those tasks.

The second major conclusion to be derived from the final rows of each block in Table I is that the group of people with systematically the least 'free time' – two-earner couples – is also the group which is systematically most under the 'time-pressure illusion'. Comparing like-for-like down each column ('men without children in two-earner couples' to 'men without children' in the other two household types, and so on), we see that people in two-earner couples invariably score higher on the 'time-pressure illusion' than do people in other household types. The differences are typically substantial. The 'time-pressure illusion' experienced by parents in two-earner households is almost 50% greater than that experienced by lone parents.[41]

CONCLUSIONS

The aims of this article have been two-fold. One has been methodological. We have introduced a battery of new concepts – 'necessary'

time in various activities, and 'discretionary time' – and we have attempted to show how these might be operationalized using the sort of data available in ordinary time-use surveys. Here we have illustrated one particular application of those concepts, to issues of 'time pressure'. But the same 'discretionary time' concept has potentially far wider applicability as a measure of autonomy and social welfare, more generally.[42] In that role, we might use it in any of the many other ways we use such social standards – in cross-time and cross-country (as well as, obviously, cross-gender) comparisons, in assessing issues of poverty and social inequality and in recommending remedies to alleviate these problems.

The second and more substantive aim of this paper has been to explore whether the 'time pressure' that people feel they are under is real or imagined – or, more precisely, whether it is a matter of choice or of necessity. That people work long hours, at home and on the job, is one thing; whether they have to or not is quite another. The ordinary time-use measure of actually uncommitted 'free time' addresses the former question alone. We address the latter question, by looking at potentially uncommitted 'discretionary time' alongside that more traditional measure. Doing so suggests that those who feel most overworked – those who have least 'free time' – largely do it to themselves.

NOTES

[2]   Bittman and Rice (2002) find no marked change between 1974 and 1997 in the average amount of time spent in paid labour by Australians of 'prime working age' (25–54 years of age). There had, however, been a significant redistribution of paid labour from men to women, and time spent in paid labour had also become more dispersed. Although the combined time spent in paid labour by older couples decreased on average, among those of prime working age combined time in paid labour increased. Australian workers also spent increasing amounts of time in paid labour outside 9 am to 5 pm on weekdays.

[3]   Compare Linder (1970), Hochschild (1989, 1997), Baxter and Gibson (1990), Juster and Stafford (1991), Schor (1991, 2000), Bittman (1992, 1999), Robinson and Godbey (1997), Esping-Andersen (1999, ch. 4), Bittman and Wajcman (2000), Gershuny (2000), and Sullivan and Gershuny (2001).

[4]   For information about the 1992 Australian Time Use Survey, see ABS (1993, 1994). We use this survey rather than the subsequent (1997) one because, in virtue of his time as a researcher in the Australian Bureau of Statistics, one of the authors had access to fuller income data for the 1992 survey. Our results are broadly (but not precisely) replicable on the version of that data file that is publicly available.

[5]   Except the poverty line for income was calculated on the basis of the entire sample.

[6]   We confined the sample to households populated only by: people living alone; lone parents; husbands; wives; and children of any age. Thus, for example, households in which the head's parent or sibling also resides would be excluded.

[7]   For sample pages from the Australian survey, see ABS (1993) and Stinson (1999). On the 'diary' vs. 'recall' methodologies, see Robinson (1985). Whilst it might be thought that keeping a diary itself takes time, and does so disproportionately from some activities rather than others, the best evidence seems to suggest that there is no systematic bias introduced in the proportions of people's days spent on various activities as reported in diary-based vs. other methodologies (Robinson and Godbey 1997, pp. 61–67).

[8]   In this we follow traditional practices in time-use analysis. It has recently been suggested that analysis of secondary activities might yield some interestingly different results, pertaining particularly to the 'intensity' of time use, particularly by mothers of young children (Gershuny and Sullivan, 1998, pp. 75–79; Bittman and Wajcman, 2000). Indeed, the recording of secondary activities at all might alter what people report as their 'main activity' (Kitterød, 2001). Here we stick to traditional practice and ignore all those complications, however.

[9]   Fully 97.5% of respondents completed a diary for both days (ABS, 1993, p. 24).

[10]   Analogous tasks of caring for dependent relatives living in households other than one's own fall under 'voluntary work and community participation'. We do not include that as part of 'unpaid household labour time' here, because we have no count of how many people outside one's own household one is responsible for caring for, analogous to the number of people in one's own household to which we here index 'necessary unpaid household labour time'.

[11]   The ABS (1998a, 1998b), following Ås (1978, 1982), categorizes personal care (sleep and meeting other biological needs) as 'necessary'; paid work as 'contracted'; and unpaid household labour (cooking, cleaning, shopping, childcare, etc.) as 'committed'. Those labels are unhelpful insofar as they imply that it is not strictly 'necessary' to do any paid work or housework or childcare. Clearly, those are necessary tasks too; and below we will offer estimates for how much time it is minimally necessary for people to spend performing them. We therefore eschew this way of labeling time-use categories, in favour of the more descriptive terminology in the text.

[12]   Note that 'leisure' is one, but only one, component of 'free time'. 'Leisure... means some subjectively gratifying activity' (Andorka, 1987, p. 151); people who have 'too much free time' may not find it subjectively gratifying (Campbell, et al., 1976, pp. 356–357; Robinson 1977, ch. 6; cf. Gershuny 2000, pp. 202–211).

[13]   We here include under 'time in paid labour': time spent in one's main or other job; overtime and work brought home; unpaid work for family business or farm;

breaks at work; and travel to work. We exclude time devoted to job search activities, communication associated with labour force activities and education, all of which are sometimes included under this category.

[14]   It varies according to other things, too: particularly the number of children and the age of the youngest child. But to keep the table manageable we confined our report to a simple 'no children' vs. 'with children (of any age)' breakdown.

[15]   Lone fathers are a striking exception. The sample contains few (only seven) households of this type, so those statistics might be unreliable. Still, on that evidence it seems that lone fathers have more free time than childless single men (or indeed any except two other groups in Table I). Lone fathers report doing less time in both paid labour and unpaid household labour than fathers in the other two household categories. One explanation might be that they need to do less. The wage rates of lone fathers are higher (A\$21.04 per hour on average) than any of the other sub-groups we examine, by a wide margin (lone men without children are next highest, at A\$15.85; working mothers in two-adult, one-earner households are lowest, at A\$12.59). Thus lone fathers can earn more money working fewer hours in paid labour. Similarly, their unpaid household labour – which is a function of the number of people in their households – is less because they tend to have fewer children living with them (1.14 on average, as compared to lone mothers' 1.58 and couples' 2.22 where there is only one wage-earner and 2.04 where both partners are in paid labour). Furthermore, their higher wages also enable them to buy in substitutes for doing unpaid household labour themselves (which presumably is what makes their actual time in unpaid household labour less even than our estimate of what is the minimum 'necessary', to foreshadow the discussion of the next section).

[16]   It is dramatically true of the childless, whether they are men or women. It is also dramatically true comparing fathers in dual-earner households with lone fathers, and mothers in dual-earner households with mothers in two-adult, one-earner households. In the remaining pair of cases, the differences are less striking although nonetheless in the same direction.

[17]   Part of the explanation is that children provide extra household labour in such households (Goldscheider and Waite, 1991).

[18]   We have noted the misleading labeling of Ås (1978, 1982) and the ABS (1998a, 1998b) at note 11 above. Robinson (1977, p. 45) canvasses these issues, but he quickly despairs that 'these distinctions between "obligatory" and "discretionary" time become … difficult and arbitrary'; at that point he abandons any attempt to distinguish whether time spent in 'obligatory activities' (paid and unpaid household labour and personal care) is itself 'obligatory' or 'discretionary'.

[19]   See, generally, Atkinson (1998). Ideally, we ought analyze 'disposable income' net of government taxes and transfers here; but income reports in the 1992 Australian Time Use Survey are 'gross' (post-transfer but pre-tax), and that is what we here have to use in consequence.

[20]   Whether poverty measures should be absolute or relative; where the line should be drawn (even if relative, whether the mean or median should be used); what equivalence scale should be used to adjust for household size; and so on. For surveys of these issues, see: Atkinson (1987, 1995, esp. ch. 2, 1998, esp. Lectures 1, 3), and Saunders (1994, ch. 8).

[21]   Note similar assumptions are involved: in estimating people's 'earnings capacity' (Garfinkel and Haveman, 1977, 1978; Haveman, 1993; Haveman and Buron, 1993; Haveman and Bershadker, 1998, 2001); and in adjusting GDP for the imputed value

of 'household production' (Beckerman, 1978; Saunders, et al., 1994; Goldschmidt-Clermont and Pagnossin-Aligisakis, 1995; OECD, 1995; Ironmonger, 1996). In effect, all those calculations assume that a large number of new workers could enter the labour market, without affecting the wage rate associated with any given suite of human capital characteristics.

[22] One reason for thinking there might not be is that people (those in full-time jobs anyway) regularly report their 'preferred work hours' to be substantially less than they are actually working. It is natural, but wrong, to infer from those results that people do not work shorter hours because they cannot do so. The standard question is misworded: of course people prefer to work fewer hours and still receive the same total income. The gap between actual and preferred work hours reduces substantially when the question is reworded to ask: 'Which of the following would you prefer – work longer hours and earn more money; work the same number of hours and earn the same money; work fewer hours and earn less money' (Jacobs and Gerson, 2004, pp. 63–79).

[23] Judging from the 1990 ABS Income and Housing Costs Survey typically around 5% of workers with wage rates between A\$1 to A\$35 per hour work between 1 and 9 hours a week and another 5% work between 10 and 20 hours a week. It is of course true that not all workers could simultaneously reduce their working hours to what we specify as 'necessary'; if they did, the macro-economy would alter in ways that are beyond the scope of this project to map. Here we are envisaging discretion in terms of what would happen if one person, or household, altered its behaviour, holding all else constant.

[24] Recall the phrase, 'sleep deficit' – a phenomenon which parents of newborns know all too well.

[25] We use medians in calculating cash poverty lines but means and standard deviations when dealing with unpaid household labour and personal care. The reason is that the distribution of equivalent cash income is typically much more skewed than are the distributions of unpaid household labour (for households of various specific sizes) and personal care. In the 1992 Australian Time Use Survey, for example, the skewness statistic for the distribution of equivalent cash income is $g_1 = 2.38$, whereas the skewness statistics for these other distributions rarely go over 1.00 and never go above 1.34.

[26] Our benchmark – because it is based on widely accepted conventions about how to set a poverty line in terms of money – is the proportion of people who fall below the cash poverty line. In the 1992 Australian Time Use Survey data, 13.90% of the sample under consideration do so. Ideally, we would like to set our standards for what is 'necessary time in personal care' and 'necessary time in unpaid household labour' in such a way that around the same percentage of the sample under consideration fall short of those marks. These measures meet that criterion well: 12.53% of people in the sample under consideration fall below that standard of 'necessary personal care time', and 15.01% of people fall below that standard of 'necessary unpaid household labour time'.

[27] The sample here consists of prime working-aged people, aged 25 to 54, recall.

[28] One of the set-piece battles in the war between the sexes, when it comes to unpaid household labour, is over whether all that work that women typically do in the household is really necessary after all – though empirical evidence suggests that, when asked separately what really is necessary, men and women tend actually to be in pretty close agreement (Bittman and Pixley, 1997, pp. 159–164).

[29] And of looking at 'distribution rules within the household' concerning how they ought be done: but that is another subject to be addressed separately, elsewhere.

[30] 'Discretionary time' might be an indirect indicator of 'welfare', as well, with the addition of one further assumption: the assumption that people (either as an empirical generalization or an analytic necessity) choose in such a way as to maximize their own welfare (Goodin, 1995, ch. 8). Insofar as that is true, then *ceteris paribus* a wider choice set automatically translates into higher welfare.

[31] As seen from Table I, there is a small degree of variation between men and women in actual personal care time, but not much – too little, we think, to justify ascribing different amounts of 'necessary personal care time' to these two groups. There is greater variation across household types, but that is more likely a result of people in time-pressed households skimping on personal care. It is unlikely that people's need for time to eat or sleep varies significantly depending on how many children they have.

[32] The median weekly equivalent income in this survey was A\$366.04, which is broadly in line with evidence from other surveys of the same period. The poverty line is half the median, or A\$183.02 per week.

[33] We assigned a wage rate to people in this way only if they reported that 'wages and salaries' constituted their 'main source of income'. Insofar as these people also receive some income from other sources (such as investments or government), they will need to work less hours in paid labour than we here estimate to get their household's income up to the poverty line; but since the 1992 Australian Time Use Survey does not itemize income by source, we have no way of adjusting our estimates to avoid this effect.

[34] Within our restricted sample – one-family households populated only by heads, spouses, non-family members living alone, or children, in which the heads, spouses, and non-family members living alone were all aged between 25 and 54 years – the number of wage-earners amongst the heads of households, spouses, and non-family members living alone in the Income and Housing Costs Survey was 8551, compared to 1575 in the Time Use Survey.

[35] Broadly following Saunders, et al., (1994), we used: 'hours worked' and (to test for a curvilinear relationship) 'hours worked squared'; 'age' and 'age squared'; 'education'; 'sex'; 'marital status'; and 'occupation' (but not 'industry', thinking it reasonable to expect people to change industries but not occupations when reducing their working hours); in addition, we added interactions between both 'hours worked' and 'hours worked squared' and all the other variables that proved to be significant in that equation (all of which did except 'marital status'). The adjusted $R^2 = 0.172$. The impact of 'hours worked' was slightly negative (i.e., reducing hours worked actually increases slightly one's wage rate), partially offset by a weak positive relationship with 'hours worked squared'. Gornick and Jacobs (1996) report a weak relationship in the opposite direction, based on their analysis of an earlier survey; but using their same procedures on the 1990 survey – or using the earlier survey they used and treating 'hours worked' as a continuous variable (rather than as a 'full-time/ part-time' dummy, as they did) – yields results similar to our own. The most plausible explanation of why working shorter hours is associated with slightly higher wage rates in Australia is that many of the ordinary benefits of employment (holidays, sickness leave, long-service leave, etc.) are not available to casual workers, who are (very partially) compensated for their absence by slightly higher wage rates instead.

[36] Other people in the household, if present, are assumed to have minimal responsibilities for necessary (as opposed to discretionary) paid labour.

[37] Children might also contribute supplementary income to the household, but our procedures assume that responsibility for meeting basic household necessities falls to the head of the household and spouse alone.

[38] 'Literally in paid labour' in the sense of excluding breaks at work and travel to work.

[39] We specify unpaid household labour time costs in terms of the number of extra members of the household, without differentiating between extra adults and extra children. Time-use data show that people spend much more time in unpaid household labour when a second adult is added to the household than when the first child is added to a single-person household. On the face of it, however, it is implausible that they *need* to spend more time taking care of their partner than their first child. It may be that the two adults simply enjoy spending that extra time together.

[40] Though we have other evidence that they do (ABS, 1998a, p. 12).

[41] The time-pressure illusion is: for mothers in two-earner households compared to lone mothers, 40.50 vs. 28.32 hours per week (or 43.0% greater); for fathers in two-earner households compared to lone fathers, 48.20 vs. 32.49 hours a week (or 48.4% greater).

[42] For precursors in this vein, compare: Campbell et al. (1976), Beckerman (1978), Van Parijs (1995), Goodin et al. (1999, pp. 34–36, 222–235), and Goodin (2001). For another application of the present methodology to assess the contribution of the welfare state to temporal autonomy, see Goodin et al. (2004).

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