A LIST OF EVERYDAY TASKS FOR USE IN PROSTHESIS DESIGN AND DEVELOPMENT

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ABSTRACT

This report describes a pilot study made as a starting point for the functional specification of powered upper-limb prostheses.

A list of tasks, intended to cover all the activities of normal adult daily life (excluding jobs or recreations), was compiled. They were scored by a small group of able-bodied subjects for importance in independent living, so that design analysis would be simplified by using a restricted number. Opinions differed greatly, but the items have been divided into groups on an approximate scale of importance. The list is presented here in this form.

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INTRODUCTION

The application of external power to upper-limb prostheses has opened the possibility of greatly increased function. In order to realize this potential to the full (which includes keeping down the level of side effects such as weight and control complexity), it is necessary to look very carefully at the function to be provided. This implies starting

from a more basic position than the simple development of existing designs.

One such approach would be to imitate the natural limb, but it is not feasible at present to reproduce all its characteristics, and there is no evidence that merely leaving out some aspects is the best solution.

It seemed that design would have to start from a statement of all the required functions and properties, which should be flexible enough to allow some balancing between conflicting demands. A major part of this statement would be a list of the purposes for which the prosthesis was to be used. If these "tasks" were known in enough detail, it might be possible to analyze them so that the essential functions were described in engineering terms as design data. The analysis should extract, not how the normal person does the tasks, but the necessary conditions for their performance. (For example, one might ask what mechanical actions *must* take place for a knife to be picked up from a table and used for cutting meat.)

This approach was originally introduced to a specialist group meeting at this Unit to discuss problems of artificial prehension. However, it applies equally well to the specification of prosthetic arm movements. Furthermore, such a list of tasks would act as a basis for evaluating the final product. With a relatively clear-cut specification, both the ability of the prosthesis to meet this, and if so, its relevance to the patient's general needs, can be assessed when he wears the device.

Of course, a complete list of all the possible tasks would be enormous, and the job of analysis and design quite unmanageable. However, even a relatively short list of say 100–200 (appropriate for an initial experiment) should make clear what had been deliberately left out of the specification and why. A suitable basis for reduction might be the importance of the tasks in everyday life.

In their report on functional requirements for prostheses, Keller, Taylor, and Zahm (1) give some lists of objects and associated activities, including, for example, 56 objects used in studying patterns of hand prehension. The authors stated that they compiled the lists from daily living activities, but unfortunately did not give details as to how this selection was made, except that the tasks were "representative." Neither is there any indication of what objects and activities were considered and rejected, and, therefore, their lists did not really meet the needs of this study. They also make use of some standardized objects—cubes, prisms, spheres, etc.—in tests on actual prostheses.

Carroll (2) found quite a good agreement between the performance of similar standardized tasks and a test of daily living activities on disabled patients. However, such a correlation obtained with the hand does not necessarily apply to the specification of a device that may have to be much simpler in design. For instance, the ability to grasp

a prism may not be directly related to the ability to hold the complex objects found in ordinary life. A standardized test, however, might well be the ultimate outcome of the detailed engineering analysis of daily living tasks.

The lists given by Kay and Peizer (3) were based on voluntary responses by amputees as to the tasks for which they used their prostheses. Although they again cover a wide range of activities, they are undoubtedly influenced by the limitations of the prostheses concerned. Lists of A.D.L. obtained from therapists were liable to be affected by the abilities of their patients treated by current techniques. The same would apply to a list collected from patients themselves.

COLLECTION OF THE LIST

After some discussion in the Prehension Group mentioned earlier, it was decided to base the list on observations made by the members of their own daily activities, in order to get a reasonable amount of information relatively quickly with limited resources. Although it related to a somewhat restricted sample of the population (consisting mainly of able-bodied doctors and engineers and their families living or working mainly in urban or suburban environments) it would reveal some of the problems in this kind of approach. In the first instance this was to cover the activities needed for the personal independence of an adult. These should be common to much of the population and were regarded as having primary importance. Paid work and recreation were not included because their variety is much greater, and so also is the scope for adaptation by the patient. Housework, cooking, etc. were covered, being the sort of activities anyone might have to do at home, especially if living alone.

Initially, tasks were collected by members of the group making a sample of what they did during the day, but this produced too little information. Therefore, as full as possible a list was compiled and sent around to the members for the addition of anything else they could observe or think of. The returns from the eight subjects who took part increased the total number of items by about 20 percent bringing it to 625.

The tasks were described at the level of objects handled and the use made of them (for example "load spoon from bowl"), grouped under more general headings of dressing, eating, and so on. Implicit actions, such as that an object has to be grasped in order to be used, were not stated, since this should come out in the analysis. Repetitions were usually avoided—for instance, garments listed under the heading of "put on" were not repeated under "fold up." Only one major category, "care of children," was classified as one task—it includes a large number of activities already listed done in a different context.

This degree of subdivision was considered necessary to avoid leaving out any important objects and actions. Numbers of tasks are quoted to indicate roughly the amount of potentially varied data being considered.

SCORING

The next stage was somehow to arrange the tasks in order of importance so that a reduced number could be used for an experimental analysis. Here again there arose the problem of arriving at a preliminary assessment, without mounting a very elaborate and time-consuming survey. Accordingly, the list was circulated to the Group a second time, asking the members to score each item for its importance in independent living. To assess only the complete groups of activities (such as "eating" or "dressing") would not eliminate unimportant tasks which might be difficult to design for. Because of the very large job imposed on the subjects by scoring all 625 items, three categories were settled for, referred to in the text as "essential," "useful," and "trivial." The instructions and a short sample of the original list are given in Appendix A. Members were asked to mark two copies, one each for a man and for a woman. This was done generally with the help of a family member or friend of the opposite sex.

Seventeen lists were returned, 10 for men, seven for women. An overall assessment of each task can be obtained from the number of times it was placed in each of the score categories mentioned above. For example, "move razor over face" was scored essential in eight returns, useful in two, and trivial in seven. With 17 lists and three categories, there are 171 possible combinations of opinion about any task. These can be displayed on a diagram as shown in Figure 1. Each small upright triangle represents one combination of opinions. A task is placed in one of these according to the number of essential, useful, and trivial "votes" it has been given. (Inverted triangles are irrelevant.) A task scored the same on all the lists would appear in the appropriate corner triangle. The further away from the corner, the smaller is the contribution of the corresponding category, which reaches zero on the line of triangles along the opposite side of the diagram. The central area represents the more evenly divided combinations of opinion. An example is given by the task mentioned above, "move razor over face," which is placed in the shaded triangle. Although it has only a small representation (two) in the useful category, this does not imply that it was thought to be *useless,* but that most of the opinions were divided amongst essential (eight, given by men) and trivial (seven, given by women).

The distribution of all the tasks over the diagram is shown in Figure 2. The figures in each upright triangle are the number of tasks which were scored in that particular way. There were only 18 items (out of

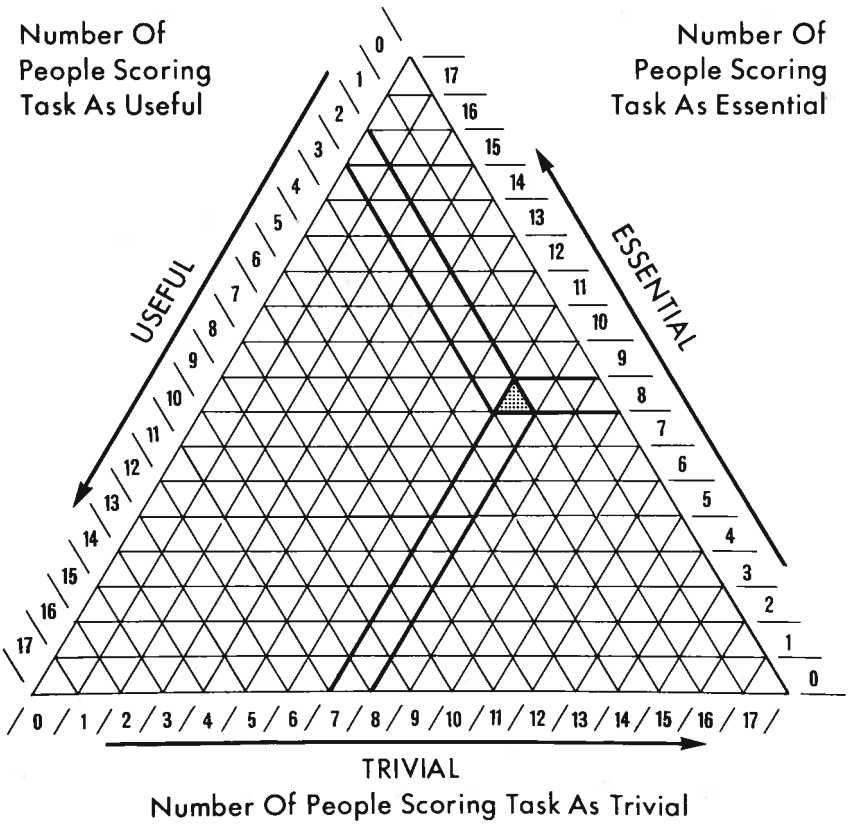

FIGURE 1.—Diagram showing all possible combinations of opinion from lists scored by 17 observers. The position of a task depends on the number of opinions about it recorded in each category, as shown by the figures along the sides of the diagram. Only the upright small triangles are used. Any tasks unanimously scored essential, useful, or trivial on all the lists would appear in the corresponding corner triangles. Those scored, for example, as essential by eight people, useful by two, and trivial by seven would be placed in the shaded triangle.

625) about which all the returns agreed, seventeen of these essential (in the top triangle) and one trivial (in the lower right triangle). Although there is some concentration in the top left-hand triangles, the tasks are otherwise scattered widely over a broad band running from the left top of the diagram (mainly essential) towards the right center of its base (mostly trivial). This illustrates the large variation of opinion about their importance. It is interesting to note that the useful category occurred least often, suggesting that the subjects tended to have fairly strong opinions about the tasks, in contrast to the commonly occurring central tendency of judgment. Of the total number of opinions (number of times each category was used amongst all tasks

and all subjects), 44½ percent were essential, 24½ percent were useful, and 31 percent were trivial.

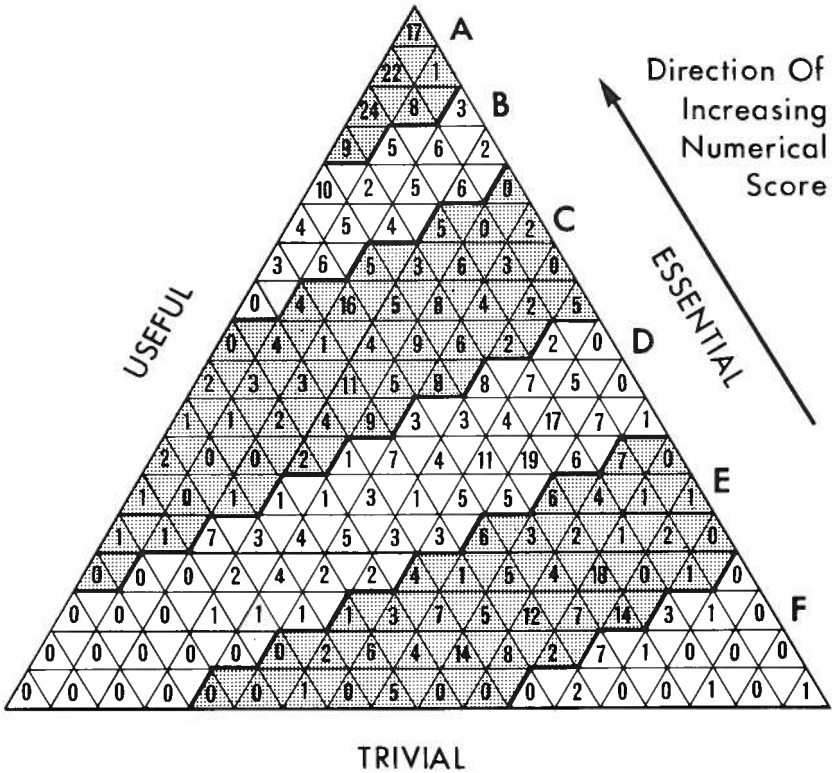

FIGURE 2.—Distribution of all the tasks amongst the possible combinations of opinion. Each small upright triangle shows the number of tasks having that particular combination of "votes" in each category. The thick lines show the divisions into the "blocks" of the final list (Appendix B).

Some of the disagreement might well be due to sex differences. Distributions plotted for the men's and women's returns separately showed a relatively greater concentration towards the essential area for women. As many of the items are concerned with cooking and other household activities, this was to be expected; the women's scores also reflect an apparently greater importance attached to self care. However, there is still a very wide scatter of opinion over both these distributions, with the trend again running from top left to bottom right.

Another possible reason for this variation is the fact that the subjects found difficulty in scoring the tasks because "normally independent" was not defined. From information supplementing the men's returns, it appeared that a range of domestic circumstances had been envisaged

by the scorers, from living with a wife and children to living alone with no help available. However, of the two men who specified the former (wife and children) category, one scored only 65 and the other 325 tasks as being essential! Three others, living alone with little access to help, gave this (essential) rating to 148, 279, and 381 tasks respectively, again a very wide range.

A simpler way of expressing the scores is to give numerical values to each category—2 for essential, 1 for useful, 0 for trivial. Thus, from 17 returns, the maximum score for any task is 34 (if all gave essential ratings), the minimum 0 (if all gave trivial ratings). A median score of 17 could be obtained from a number of combinations such as 17 useful or 8 essential + 1 useful + 8 trivial or 5 essential +7 useful + 5 trivial ratings. In Figure 2, tasks having equal numerical scores lie on lines trending obliquely downward at right angles to the essential-trivial side of the diagram, and the direction of increasing score is shown on the figure. As this direction is roughly parallel to the main band of tasks, the score should discriminate fairly well between them. The direction of the score "axis" can be varied by giving different weightings to each category, but there seemed little purpose in attempting a more exact assessment with this small sample.

Figure 3 shows the numerical score distributions for the total of returns and for the subgroups of men and women. With this method of scoring, both the number of score steps and their absolute values depend on the number of lists. Therefore, on the horizontal scale the scores are expressed as a percentage of maximum; and on the vertical axes the scales have been adjusted so that the histograms have equal areas to ease overall comparison.

It can be seen that the women's distribution is heaped up nearer the maximum score than the men's; i.e., in general, more tasks were scored essential by the women. There are few tasks with the lowest scores in the distribution for all subjects as compared with those for men and for women, indicating the disagreement between the sexes as to which items were trivial.

PRESENTATION OF THE LIST

The list, although long, is given in full (Appendix B) for several reasons. In the first place, the scores do not show any sharp division between a group of indisputably essential tasks and the rest. Furthermore, it would be a pity to lose sight of a great many items when there was not general agreement about their importance, at least in the small sample considered here. Also the complete list shows much better than a partial one the basis on which it is used in this Unit and should be of more value to other centers.

The arrangement of the list is based on the numerical scoring dis-

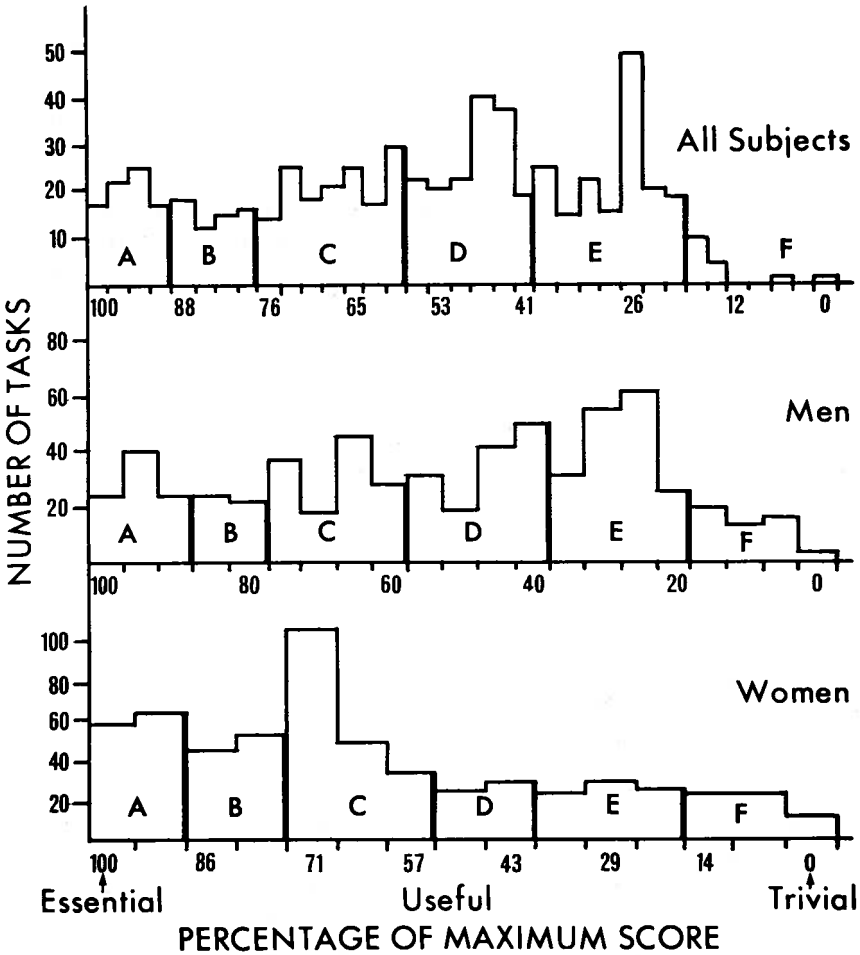

FIGURE 3.—Distribution of tasks according to numerical score (expressed as percentage of maximum), for the whole sample, and for the subgroups of men and women separately. Thick vertical lines on the histograms show the divisions into the blocks of the final list (Appendix B).

cussed earlier and shown in Figure 3. The tasks are divided up into subsidiary lists or "blocks" at the score levels of about 90 percent and 80 percent of maximum and then at intervals of 20 percent. Although these subdivisions are necessarily somewhat arbitrary, they indicate some basis on which to choose a restricted number of tasks for analysis. There seemed little purpose in showing blocks C, D, and E more finely subdivided (with a more complicated presentation), considering the greater variation of opinion in this region. Within each block, the tasks are classified in functional groups as in the original list, *not* in any order of importance.

The block scores for the subgroups of men and women are also shown on the list where they differ from the overall score of the corresponding item. This enables some account to be taken of the sex differences when choosing tasks. For example, "get money from bag" is in block B, but it was scored A by the women and C by the men.

DISCUSSION

Comparison with the other lists referred to earlier is not easy because of the different ways of describing the activities as well as differences in culture. Apart from the greater number of daily living tasks given here, the main point is that a reduced list selected on this scale of importance would be rather different in comparison with the others. For instance, the 104 comparable tasks mentioned by Keller et al. (1) include 47 of the 81 "block A" ones on this list, while 48 of theirs were not scored "A" even by the subgroups. Keller's group mention, for example, few dressing activities but several associated with smoking, perhaps reflecting differences of climate and habit between their places and dates of origin. However, much of the difference may be due to their having selected tasks as being typical manipulations; this presupposes some mechanical analysis of a wider range, which is a stage reached later in the present investigation. These other lists have shown up a few omissions, which are given at the end of Appendix B together with a few tasks sent in with the final returns.

It is interesting to note that all the tasks collected are motor activities. None of them refer to the use of the arm as a sense organ—for example, "feel temperature of water from tap." This might be because the group members were influenced by the current major interest in the motor aspects of prostheses, but not one sensory task was suggested even by their families. It should be emphasized here that this list was produced bearing in mind those whose only disability was in the upper limb; for people with additional handicaps, say in the lower limb or in vision, the list would have to be modified and extended.

One particular problem mentioned already was the difficulty the subjects had with interpreting "normal independence." A precise statement of living circumstances could have been imposed, to define the limits of access to other people for help. But the extent to which this help is sought, and the items which may be dispensed with anyway by restricting one's activities or choice of living quarters, are still matters for individual decision.

As explained earlier the numerical scores can be used to select a convenient number of items for analysis. One such choice would be the A and B score blocks for the whole sample (142 tasks). This process could be taken further by including, say, those scored A by the men and women separately, to allow for one important source of differences

in daily living activities. The extent to which this selection penetrates some of the different types of activity is shown in Table 1. For example, this section would include 29 out of the 42 eating tasks, but only 5 of the 66 concerned with meal preparation. An actual analysis, which has been described elsewhere (4), included also some extra tasks demanded by the "men living alone," together with a few borderline items such as specified types of drawer handles—an example of environmental features which are controllable to a limited extent.

TABLE 1.—*Numbers of Tasks at Different Score Levels for Various Activities*

Activities	Score Groups		
	Blocks A + B All returns	Additional A scores. Men & women separately	Total number of tasks
Dressing	21	10	55
Eating	27	2	42
Self-care	32	10	79
Use of doors, switches, etc.	14	0	30
Read, write, telephone	26	0	74
Travel	14	0	59
Meal preparation	1	4	66
House cleaning	0	0	30
Smoking	0	0	21
Washing clothes	0	0	33
Use of simple tools	0	0	33

The purpose of this analysis was to estimate the minimum spatial movements needed for a complete upper limb-prosthesis. It has already been extended to cover some aspects of prehension. The results, together with some specification as to appearance, speed, and forces required in doing the tasks, have been used as some of the design data for an experimental child's size powered arm prosthesis, now under construction (5). The group of disabled children aimed at in this project is aged 6 years and upwards. Since one of the long term objectives is to encourage their independence, this list seemed a useful starting point. A check amongst a few families showed that some 60 percent of the tasks analyzed were already expected to be done by six of the seven normal children of this age, and this would of course apply increasingly as they grew older. During the design work, it has been useful to estimate what tasks may be compromised by the limitations of alternative engineering solutions. The list will be used as well in the clinical evaluation of the prosthesis.

In spite of its limitations, this small-scale study has extracted from everyday life many specific tasks about whose importance and relative priority there is a fair amount of agreement. A prosthesis which would not allow their performance would have serious disadvantages for a disabled person trying to lead a normal life (without relying heavily on help from others, on technical aids, or on alterations to the environment). Such details of daily living are needed to guide not only rational design but also realistic evaluation of much equipment for the handicapped. This procedure itself is still in the experimental stage, but if it should prove feasible and useful, a larger scale survey to define the needs more accurately could be carried out amongst the normal and disabled populations.

Appendix A

1. SCORING INSTRUCTIONS

We need to get an idea of the importance of each item in the daily life of a normal adult. The intention is not necessarily to have a prosthesis of very limited use, but to make the approach to its design manageable.

Would you please score each item or group on the list using the following criterion: How important is it for an adult to be able to do the activity himself, if he is to be normally independent?

Categories:

(i) **Essential, very important - draw a ring round (thus.)**

(ii) **Useful but not essential - underline.**

(iii) **Not important, unnecessary - leave blank, no mark.**

It is vital that everything be scored; a partly completed list is of no value. If you think the items in a group are equally important or inseparable, you can score the whole group together.

As we have discussed at the meetings, there may be various reasons for the importance of a task. For instance, although one may not have to do it oneself, if it is done very often during the day, it has a considerable effect as regards independence.

A space is left between each group for remarks—for instance, you may know of some device which would avoid the need for an activity or object. But please do not score the items with this in mind; do not downrate something because an amputee or dysmelic patient cannot do it or because there is an external aid available.

Two lists are enclosed, one to be completed for a man, and one for a woman. We would be very grateful if you would fill these in, getting such help as you need from your family and friends.

2. PART OF ORIGINAL LIST SHOWING LAYOUT AS SCORED ON ONE RETURN

Eating and Drinking

15. Load spoon from jar, bowl, plate. Unload spoon into plate, mouth. Use fork for impaling or pushing or as spoon. Spoon and fork for lifting. Knife for cutting, pushing, or spreading, peeling fruit. Stir with spoon. Hold and break food with fingers. Lift and tilt cup, mug, wineglass, tumbler, jug, bottle. Unscrew jar, bottle. Undo tin, packet. Use corkscrew, bottle-opener. Shake bottle, pepper pot. Roll up napkin, remove from and replace in ring. Wipe mouth, fingers.

Appendix B

EXPLANATION OF LIST OF EVERYDAY TASKS

The list is divided into blocks, according to the numerical scores based on all 17 returns, expressed as a percentage of maximum (see Fig. 3 and text).

Block	*Range of scores included, %*	*Number of tasks*
A	100–91	81
B	88–79	61
C	76–59	151
D	56–41	159
E	38–21	157
F	18– 0	16

(The apparent gaps between the ranges above arise from the whole number steps in the numerical scores.)

The columns headed "subscore" show the block scores from the men's and women's returns worked out on a similar basis (see Fig. 2), only where these are different from the main block score. (Where nothing is indicated, the subscore agrees with the main score.) Asterisks indicate the tasks about which opinions were unanimous in each group.

LIST OF EVERYDAY TASKS

Some of the tasks listed in the following may not have the same meaning in the United States as they have in Great Britain. For example, "poppers" in block C are equivalent to American snap fasteners, and "braces" are suspenders. Block D shows "suspenders" which are either men's or women's garters in America. An electric razor is shown as "dry razor" in block E. Other items such as in block D under "mains fuse" and in block F under "solid fuel stoves" are tasks that are rarely performed in the United States.—Editor

Item	Subscore = M	W
BLOCK A		
Dressing:		
Hold clothes to insert limb or head, pull on or off:		
shoes		B
socks		B
pants	B	*
trousers		*
jersey		*
shirt		B
coat		
pyjamas		B
Do up and undo:		
buttons		*
zip		*
Clothes on body:		
tuck in		
adjust		
Washing etc:		
Turn taps		*
Plug in and out		
Rub self with:		
nail or shaving brush		
towel		*
sponge	B	*
Brush teeth *	*	*
Brush hair		*
Comb hair		*
Eating:		
Load spoon from:		
bowl		
plate*	*	*
Unload into:		
plate		
mouth*	*	*
Use fork for impaling	*	
Use fork as spoon	*	

= Where different from overall score
M Men
W Women
* Unanimous opinion

LIST OF EVERYDAY TASKS (Continued)

Item	Subscore = M	W
Use knife for:		
cutting	*	
pushing		
spreading	*	
Stir with spoon*	*	*
Lift and tilt:		
cup*	*	*
wine glass		
tumbler*	*	*
jug		*
bottle		*
Get in or out of bed		
Pull or push:		
bedclothes		*
pillow		*
Lavatory:		
Paper:		
unroll*	*	*
pull off*	*	*
fold*	*	*
wipe with*	*	*
Flush:		
chain		*
lever		*
Get out/put away handkerchief from pocket		

Item	Subscore = M	W
Apply to nose		*
Wipe		*
Open/unlock doors:		
knob		
lever	*	
latch		
key		*
bolt		
Ring bell	B	*
Telephone:		
lift/replace receiver		*
dial		*
Reading:		
Get from shelf (amongst or under others):		
book		
magazine		
hold steady		*
turn pages*	*	*
Newspaper:		
unfold/fold		
turn large pages		
Letters:		
open with knife		
pull out		
unfold		

Writing:		
write with pen/pencil*	*	*
pick up paper from table		B
fold		
place in envelope		
seal		
tear out stamp		
lick		
affix		
put in post box		
Public transport:		
Get from pocket or put into:		
money/ticket*	*	*
Hand over	*	
Put in slot	*	B
Pick up from counter:		
coins*	*	*
notes*	*	*
ticket*	*	*
Hold:		
rail*	*	*
strap		
BLOCK B		
Cupboards and drawers:		
Pull open/push shut (various handles):		
cupboards		A
drawers		A
Turn knobs		
Dressing:		
Lift, replace garments (possibly under others)		A
Lift & place on hooks/hangers:		
coats		A
trousers		A
Hold to insert limb/head, pull on or off:		
vest		A*
Do up/undo tie		
Pull from inside out:		
sleeves		
Put on watch	C	A
Washing etc:		
Rub sponge with soap	C	A*
Flannel/sponge:		
dip in water	C	A
squeeze	C	A
Rub self with:		
soap		A
flannel	C	A*
Lift down towel and replace	C	
Toothpaste tube:		
unscrew	C	A

= Where different from overall score
M Men
W Women
* Unanimous opinion

LIST OF EVERYDAY TASKS (Continued)

Item	Subscore = M	W
squeeze		A
apply to brush		A
Dentures:		
remove	C	
clean	C	
Eating:		
Load spoon from jar		A
Use fork for pushing		
Use spoon & fork for lifting		C
Use knife for peeling fruit	C	
Hold food with fingers		
Lift and tilt mug		A
Unscrew:		
jar	A	
bottle	A	
Undo:		
tin	A	
packet	A	
Wipe:		
mouth		A
fingers		A
Spectacles:		
Wipe		

Item	Subscore = M	W
Put on/take off		
Lavatory:		
Dressing actions		A
Raise and lower seat	A	
Scratch any part of body	A	C
Use door knocker	A	C
Operate switches:		
toggle	A	C
push button		
cord	A	C
Wall plugs: pull out/push in		
Wind watch		
Reading:		
place book etc. on table/knee	A	
open letters with finger		A
Writing:		
get out pad/book	C	D
undo pen		
steady paper		
pick up piece of paper from between others		
Travelling:		
Put on/take off:		
hat		

boots	A	
Carry luggage		
Public Transport:		
Get change or ticket from:		
bag	C	A*
purse	C	A*
Open door of train	C	A*
Shopping:		
Carry:		
bag		A*
basket		A
put in and take out from basket	C	
Carry parcels		
Preparing meals: hold kettle	C	A*

BLOCK C

Cupboards and drawers:		
with two handles		B
slide knobs		
press knobs		B
bar handle		
hanging handle		B
groove		
Dressing:		
Lift and replace on hooks/hangers:		
skirts	D	A
Hold to insert limb/head, pull on/off		
stockings	D	A*
skirt	E	A*
bra	E	A*
girdle	E	A*
slip	E	A*
nightdress	E	A*
Do up/undo:		
hooks	D	A
poppers	D	B
safety pins	D	B
laces	B	
buckles	D	B
braces	D	B
cuff links		B
scarf	D	B
Fold up clothes		
Roll/unroll socks	D	
Pull from inside out:		
trousers	B	
Washing etc.		
Put bathmat on floor		
Hold side of bath		B
Rub with soap		
flannel	D	A*
nail brush		

= Where different from overall score
M Men
W Women
* Unanimous opinion

LIST OF EVERYDAY TASKS (Continued)

Item	Subscore = M	W
shaving brush		
Rub hair	D	
Lift and replace:		
flannel	D	B
Nails:		
cut		B
file		B
clean		B
Eating etc.		
Break food with fingers		
Use:		
corkscrew	D	
bottle opener	D	
can opener		
Shake:		
bottle		
pepper pot		
packet		
Dishes etc.		
lift		B
pass		
Lift out:		
cutlery	D	B
plates	D	B
cups	D	B
glasses	D	B
jars	D	B
from amongst/under others	D	B
from hooks	D	B
Arrange things on table	D	
Wipe table	D	B
Fill jugs	D	
Serving food including:		
soup	D	B
eggs in cups	D	A
Pour from jugs		A
Spectacles:		
open case		
remove		
Get tissue from box	D	A*
Clean out nose	B	
Fold handkerchief		B
Rub any part of body	B	
Push on chair to get up	D	
Embrace etc.		B

various fittings		
levers		
screw knobs		
cords		
Open/shut windows:		
Draw curtains		
Operate switches:		
push-bar	B	
knob	B	
slide		
Pull up chairs		
Wind clocks		B
set hands and alarm		B
shut off alarm		B
Telephone call box:		
coins in slot	B	
Reading:		
go through vertical pages (file/index)		
Writing:		
rub out		B
tear paper	D	
pin)	D	
clip) papers together	D	
Use press-type ball point		
Write on cheque stubs		
Travelling:		
put on/take off:		
gloves		B
coats	D	B
Public transport:		
Open train window		B
Operate:		B
outside handle		D
strap handle		
lever		
sliding door		B
Hold bannisters	D	
Hold children's hands	D	B
Packing:		
Do up/undo various types of bag:		
zip		
lock		
Open and fill with:		
clothes		
papers		
Lift up/down from floor		
Shopping:		
place bag/basket on arm		

= Where different from overall score
M Men
W Women
* Unanimous opinion

LIST OF EVERYDAY TASKS (Continued)

Item	Subscore = M	W
Preparing meals:		
hold saucepans	D	B
lift lids	D	B
turn on electric cooker		A
light gas cooker		A
cut meat	D	
stir & turn contents of pan	D	B
pouring	D	A
shaking	D	B
spooning	D	A
lids:		
pull off	D	B
screw	D	B
corks	D	B
packets	D	B
pick up:		
pans & dishes:		
with handles	D	B
without handles	D	B
soft food	D	B
hard food	D	B
down to tiny pieces	D	B
undo:		
butter packet	D	B
milk bottles	D	A
plastic film	D	B
paper packets		
card boxes		
Washing up:		
squeeze detergent		
pour detergent		
stack china		
put things in water:		B
rub		B
scrape		B
flat and		B
long things		B
vessels		B
lift and tip vessels		B
washing up bowl	D	
dry things with cloth		
squeeze cloth		B
and wipe with		B
Bedclothes:		
grasp	D	B
pull	D	B
smooth out	D	B

Take out and replace light bulbs		D
Car:		
open/shut		
garage		
and car doors	D	
insert key		
turn key		
controls:		
pull		
push		
turn		
wind		
hold		
operate together		

BLOCK D

Dressing:		
take out and replace shoe trees		
hold to insert limb or head & pull on & off:		
many types of dress	F	A
do up/undo:		
suspenders	E	A*
cords	E	C
belts (& pull through loops)	E	B
roll/unroll stockings	E	C
brush clothes		C
Cleaning teeth:		
hold toothmug	E	C
use:		
block paste		
powder		C
Shaving:		
assemble razor	C	F*
move razor over face	A	F*
scrape face	C	F*
take razor blade from packet	C	E
handle electric razor	B	E
Washing hair:		
undo bottle of shampoo		C
pour) onto head		C
shake) onto head		C
undo lipstick	F	A
apply makeup to face	F	A*
and wipe	F	A*
apply ointments to skin generally		B
undo:		
tin of plaster		
packet of plaster		
cut with scissors		
pull off covering		
apply to wound		

= Where different from overall score
M Men
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LIST OF EVERYDAY TASKS (Continued)

Item	Subscore = M	W
Eating etc:		
roll up napkin		
remove from/replace in ring		
sharpen) and use) knife (carving)		
get tablecloth from drawer or cupboard		
get mats from drawer or cupboard		
spread tablecloth		
fold tablecloth		
stack china	E	
carry tray	E	
Get handkerchief from bag	F	A
Point		
Other gestures		
Swing arms while walking		E
Shake hands		C
Pull blind cords		
Operate milled edged controls	C	
Write while telephoning		
Open rolled journal/paper		
Steady ruler		C

Item	Subscore = M	W
Crumple paper		C
Throw paper in basket		C
Align papers together		C
Spread elastic bands over packets	E	
Sharpen pencil:		
rotary		C
or knife		C
Fill pen:		
undo bottle		C
hold while operating lever	E	C
Cut string off and	C	
unfold parcel wrappings		
Typing:		
pick up paper		
insert in roller		
wind on		
push levers		
push keys		
Care of children: Use of hands similar to self care, though arm movements different, with the addition of holding and guiding their bodies and limbs: all tasks done in the face of continual movement.	E	C
Carry umbrella	E	C

Put up umbrella	E	C
Fold/unfold pram	E	C
Push pram	E	C
Do/undo		
straps	E	B
buckles	E	C
harness	E	C
Carry child in arms	E	C
Lift luggage from:		
car boot	C	
train rack		
Preparing meals:		
Open oven door		B
Vegetables and fruit:		
wash		C
peel		C
cut		C
chop		C
Slice bread		C
Mix & stir:		
liquids	E	C
powders	E	C
stiff substances	E	C
Beat with:		
fork	E	C
egg whisk	E	C
electric mixer	E	C
Mash	E	C
Spread	E	C
Cut with sissors	E	C
Rub on grater	E	C
Scrape from board into vessel		C
Move oven shelves	E	C
Undo vacuum lids		C
Put on apron		C
Put towels into:		
holders		C
rails		C
Get out vacuum cleaner	E	C
put together pipes etc.	E	C
Carry	E	C
plug in	E	C
switch on	E	C
work to and fro	E	C
open	E	C

= Where different from overall score
M Men
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* Unanimous opinion

LIST OF EVERYDAY TASKS (Continued)

Item	Subscore = M	W
empty	E	C
Brush while holding pan		C
Dust:		
surfaces	E	C
objects	E	C
Wipe	E	C
or rub	E	C
vertical or horizontal surfaces	E	C
or handles	E	C
shake rugs	E	C
Push floor broom		C
or cleaner		C
Carry bucket		C
dip cloth		C
or brush		C
wipe with		C
and squeeze cloth		C
scrub		C
Washing clothes by machine:		
fix hoses	E	C
open lid	E	C
switch on	E	C
push in clothes	E	C
pour in soap	E	C
wipe over	E	C
by hand:		
fill basin	E	C
put in soap	E	C
whisk up	E	C
put in clothes	E	C
swish round "	E	C
rub "	E	C
wring out "	E	C
hang up (pegs)	E	C
Ironing:		
arrange clothes on board	E	C
hold	E	C
and smooth with iron	E	C
Cleaning shoes:		
Open:		
tin		C
jar		C
tube		C
scrape off mud		C
hold shoe		C
apply and		C
rub off polish		C
with cloth		C
or brush		C

Shake bedclothes		C
Pillows:		
in/out of case		C
puff up	E	C
Tuck in bedclothes		C
Move bed		C
Nailing:		
hold nail steady	C	F
strike with hammer	C	F
Mains fuse:		
pullout	C	E
unscrew wire	C	E
unwind new wire	C	E
& cut off card	C	E
& insert	C	E
screw up	C	E
push in fuse	C	E

BLOCK E

Dressing etc.:		
do up/undo studs		D
adjust length of:		
suspenders	F	C
braces	D	
Use dry cleaner (unscrew, hold cloth & tip, rub with cloth)		F

Put on:		
ring	F	C
bracelet	F	C
earrings	F	C
necklace	F	C
Use talcum powder		D
bath hat	F	
shower		D
Dry razor	C	F*
Pin up hair	F	C
Handle hair drier	F	
Undo containers for:		
face powder	F	A
cream	F	A
Remove foreign body from eye		D
Use tweezers	F	D
Pull out leaf of extending or gate legged table		
Push trolley	F	
Hot water bottle:		
unscrew		
fill		
empty		
Load lavatory paper carrier		D

= Where different from overall score
M Men
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* Unanimous opinion

LIST OF EVERYDAY TASKS (Continued)

Item	Subscore = M	W
Get handkerchief from sleeve	F	B
Clasp hands		
Lean on table		
Rest head on hand		
Smoking:		
get from pocket		
cigarettes		
pipe		F
matches		
lighter		
tobacco		F
open:		
packet		
case		
place cigarette in mouth		
press lighter		
strike match		
and apply		
shake off ash		
pull opening strip of packet		
open tobacco tin		F
stub cigarette		

Item	Subscore = M	W
Use propelling pencil		
Replace ballpoint cartridge		F
Squeeze or press knob		F
pen filling		F
Parcels:		
wrap up in paper		
tear off and	D	
apply sticky tape	D	
unreel string and		
cut off with knife or scissors		
tie up with string		
undo knots		
lick and		
apply labels	F	
Typewriter:		
remove cover	D	
replace ribbon		
interleave carbon		
pull levers		
push or pull & turn cog	D	
erase	D	
Travelling etc.		
On or off:		
headscarf	F	C
Roll umbrella		

Fasten umbrella		
Use walking stick	F	
Bicycle:		
pump tires		F
push along		F
lift		F
hold handle bars		F
operate:		
gear lever		F
brakes		F
lamp switch		F
Pull basket on wheels		D
Preparing meals and clearing:		
knead		D
crumble		D
rub between fingers		D
roll pastry		C
turn handle of mincer		D
and push things in		D
put celery etc. into glass	F	
use pepper grinder	F	
set up electric mixer or grinder		C
load/unload and		C
operate washing up machine		C
Housework etc.		
beat rugs		C
carry and		
mount step ladder		
use aerosols		
hold clothes for mangle		
and turn handle		
Get out and set up iron		C
and fill with water		C
Get out and set out ironing board		C
Fold clothes after ironing		C
Tip liquid onto cloth	F	
Turn mattress		D
Solid fuel stoves:		
with shovel:		
fill hod		
bucket		
stove		
open stove doors		
riddle		
pull out ash can		
carry can or bucket		
empty can or bucket		
poke fire		

= Where different from overall score
M Men
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LIST OF EVERYDAY TASKS (Continued)

Item	Subscore = M	W
pick up with tongs		
sweep up with brush		
sweep up with brush & shovel		
light fire		
Sewing:		
cut with:		
large scissors		C
small scissors		C
hold and	F	D
fold materials	F	D
hold buttons	F	C
pick up pins (from surface, amongst others, or cushion)	F	D
and stick through materials	F	D
pick up needle	F	C
thread needle	F	C
use machine	F	D
Simple domestic tools:		
making holes:		
unscrew/screw drill/chuck		F
insert drill		F
push while turning handle		F
or pull trigger (electric)		F
screwing:		
hold screw or object	C	F
rotate and	C	F
push driver	C	F
pull with	D	F
or hold spanner	D	F
pliers:		
grasp tight	D	F
rotate or	D	F
pull with	D	F
glueing:		
unscrew lid	D	F
squeeze tube	D	F
or dip brush	D	F
steady object while applying	D	F
press two pieces together	D	F
painting:		
lever off lid	D	F
stir and	D	F
dip brush	D	F
make strokes	D	F
rinse brush in solvent	D	F
and wipe	D	F
prepare surfaces:		
wash	D	F
rub	D	F
scrape	D	F
hold and saw wood	D	F

rub with sandpaper	D	F
operate oil can (squeeze or pistol grip)	D	F
prepare cable and fix mains plug	D	F
Flowers in pots and vases:		
water		D
tend		D
arrange		D

BLOCK F

Varnish nails		E
Push cuticle		E
Knock out pipe	E	
Clean pipe	E	
Pierce cigar	E	
Roll cigarettes		
Staple papers	E	
Use sealing wax		
Unscrew valve cap (bicycle)	E	

Hold tape measure		E
Knitting		E
Push bradawl	E	D
Rotate bradawl	E	
Arms folded		
Arms akimbo		
Use hatpin*		

Unscored tasks

Shoe box	Wallet
Decanter	Padlock
Ball	Bolt
Nut	Wrench
Shears	Tape box
Flit gun	ST/tampon
Open eggs	Cartridge fuse
Share axilla, leg	

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