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"Pay Equity" through "Equitable Payment"

Time-Span of Discretion as a Parameter of Work Relative to the Establishment of "Equal Value" in a Scheme of Equal Payfor Work of Equal Value

by Alan Pearson

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"PAY EQUITY "THROUGH "EQUITABLE PAYMENT"[1]

Time-Span of Discretion as a Parameter of Work Relative to the Establishment of "Equal Value"[2] in a Scheme of Equal Pay for Work of Equal Value

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Abstract: Evidence of the political urgency of finding a reliable measure of "equal value" is followed by an analytical discussion of the so-called wage gap between women and men. Some suggestive indications from a very small study emulating Richardson[3] are reported. A research framework for testing Time-Span of Discretion against other methods of work measurement is described. A practical proposal for further research is outlined.

1. An earlier version of this paper was published in Cang, Stephen, ed. **Festschrift for Elliott Jaques**. Arlington, Virginia: Cason Hall & Co., 1992. The original version was presented to the Social Analytic Learning Society Conference, September 6-11, 1987, Oxford, United Kingdom.
2. Also known as "comparable worth" in the USA.
3. Richardson, Roy. **Fair Pay and Work**. London: Heinemann Educational Books Ltd., 1971

PREFACE

I was an undergraduate in Britain in the late 1950s when I first came across Elliott Jaques' work. Unlike the writings of others, **Measurement of Responsibility**[4] made sense of my observations and experience in the world of paid work; it has continued to do so.

Almost two decades later, I had the good fortune to meet Dr. Jaques and have counted him as an intellectual companion ever since. I have had the privilege of commenting on the manuscripts of a number of his books and remain greatly impressed with the sophistication, practicality, and comprehensiveness of his ideas about employment systems.

The paper which follows discusses the texture of the political issue of "equal pay for work of equal value" and the statistical terms in which it is commonly described. It focuses, however, on a modest research project which shows how Time-Span of Discretion could be applied in this field and what results might emerge.

Knowing Elliott Jaques' commitment to social justice, I retain the hope that this paper may stimulate scholars to formulate and carry out the research required to establish a scientific foundation for pay equity between men and women in the workplace.

Alan Pearson
Toronto
February, 1993

4. Jaques, Elliott. **Measurement of Responsibility**. London: Tavistock Publications, 1956.

INTRODUCTION

Employment is not what it was: respect for authority has greatly declined; paternalism has given way to democracy in the workplace; bonds of mutual loyalty between employer and employee have unraveled.

In particular, equity has become a prominent political issue, notably in relation to the employment of women. Elliott Jaques' early discovery, the correlation between Time-Span of Discretion and Felt-Fair Pay, must surely shed some light on this contemporary theme. For if Time-Span as an objective measure of work can be used to determine fair pay differentials, it must also be applicable to identify fair pay equivalences.

Equality between the sexes in the workplace is an important issue of social justice in Canada, as it is in many other countries. Statistical studies in the province of Ontario over the past decade have shown that on average women's pay amounts to less than 70 percent of that of men.[5] Allegations naturally ensue that women are generally victims of discrimination in the paid workforce.

Equal-pay legislation[6], designed to eliminate discrimination in pay on the basis of gender difference alone, continues to raise profound philosophical and operational questions.

Narrowly defined, as in Ontario legislation prior to 1987, "equal pay for equal work" meant in effect "equal pay for virtually identical work". In Canadian legislation, on each of four criteria – "skill", "effort", "responsibility", and "working conditions" – jobs that were subject to alleged discrimination in pay had in practice to correspond exactly. This kind of direct comparison, however, was required only in the absence of pay schemes based on criteria other than gender difference (such as seniority, performance, or merit, for example).

All jurisdictions in Canada still require at least this level of compliance from employers. They generally favour some form of "job evaluation" as the method for establishing equivalence, e.g., ranking, grade description, factor comparison, or point rating.[7]

In June, 1987, the province of Ontario legislated "pay equity" (i.e., "equal pay for work of equal value") to extend not only to the whole of the public sector but also to virtually the entire private sector within its jurisdiction.

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5. Gunderson, Morley. **The Male-Female Earnings Gap in Ontario: A Summary**. Toronto: Ontario Ministry of Labour, 1982. [Statistics Canada has reported that the earnings of full-time, full-year women workers in 1991, in Canada as a whole, were 69.6 percent of the earnings of men working full-time, full-year; this compares with 67.6 percent in 1990. However, commentators have noted that loss of employment in full-time, full-year jobs in 1991 (a year of serious economic recession) took place to a large extent in manufacturing and construction, sectors where relatively well-paid jobs are held disproportionately by men.]

6. Notably, **Canadian Human Rights Act, Section 11** (S.C. 1976-77, c.33.) and **An act to provide for Pay Equity** (S.O. 1987, c. 34.)

7. See Appendix A: Definition of Types of Job Evaluation Plans. (Source: Ontario. Minister Responsible for Women's Issues. **Green Paper on Pay Equity**. Toronto, November, 1985.)

Much administrative turmoil has resulted and much still lies ahead for many of those organizations which are required to compensate their employees equally where, on the basis of the "composite" of the four criteria listed above, their work is deemed to be of equal value.

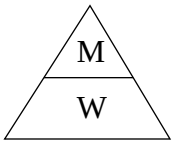
THE THIRTY-ODD-CENT GAP

"On the Average"

We are told that on the average in Ontario when full-time employees who are men earn a dollar, those who are women earn less than 70 cents. It is worth taking a moment to speculate on the meaning of that thirty-odd-cent gap.

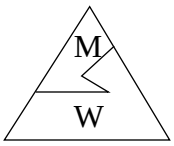
To begin with, one might look at that phrase "on the average". How might it be made up?

Imagine all the organization charts in Ontario, and their corresponding pay structures, amalgamated into one pyramid. The simplest way to account for the thirty-odd-cent gap would be if the pyramid looked like this:



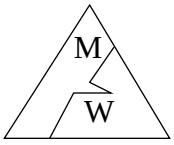
Here, all the men are higher up than any of the women, with the difference in the averages amounting to thirty-odd percent.

But the pyramid might equally well look like this:



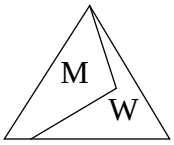
The difference in the average pay of the men and the women could still be thirty-odd percent. This time, however, even though all of the men are above most of the women, some of the women are above some of the men.

A further refinement, still keeping the averages in the same proportion, would be like this:



Here, women still occupy most of the lowest stratum but now there are at least some men at that same level. No women have yet reached the top, however.

The final possibility is this one:



In this case, some women are at the top and some men are at the bottom, with various possibilities in the pecking order in between.

Any one of the above situations could be consistent with a thirty-odd-cent gap "on the average".

Thus far in the discussion, the question of whether anyone is actually overpaid or underpaid has not arisen. Indeed, it is logically conceivable that everybody could be grossly overpaid or underpaid, resulting in an average injustice among men and among women of zero.

"Human Capital"

Still the identified gap remains. Multiple regression has rushed to fill it. The technicians call it the "human capital approach" and much effort has been expended accounting for as much of the thirty-odd-cent gap as possible.

The conventional argument presumes that the gap must exist for some good reason.[8] Efforts are made to attribute the gap to some combination of the following factors:

- occupational segregation and unequal promotion opportunities (10-15 percent);
- hours worked (16 percent);
- other "productivity-related factors" (5-10 percent); and
- unequal pay for equal work (5 percent).

"Productivity-related factors" (PRFs) is a seductive little phrase. How easily purveyors of the human-capital approach slip from "differences due to productivity-related factors" to "productivity differences". The inference is very strong that these factors relate operationally to productivity and thus demonstrate women's lower productivity.

Yet what factors have been chosen to explain why women get paid thirty-odd percent less? – education, training, experience, occupation, industry, absenteeism. The implicit assumption is that men's scores on these factors justify their receiving as much as two-thirds more pay than women. One may accept that factors such as education, training and experience could be taken as legitimate for **recruiting** purposes, but hardly as *a priori* indicators of productivity on the job.

8. See, for example, Gunderson, *op. cit*.

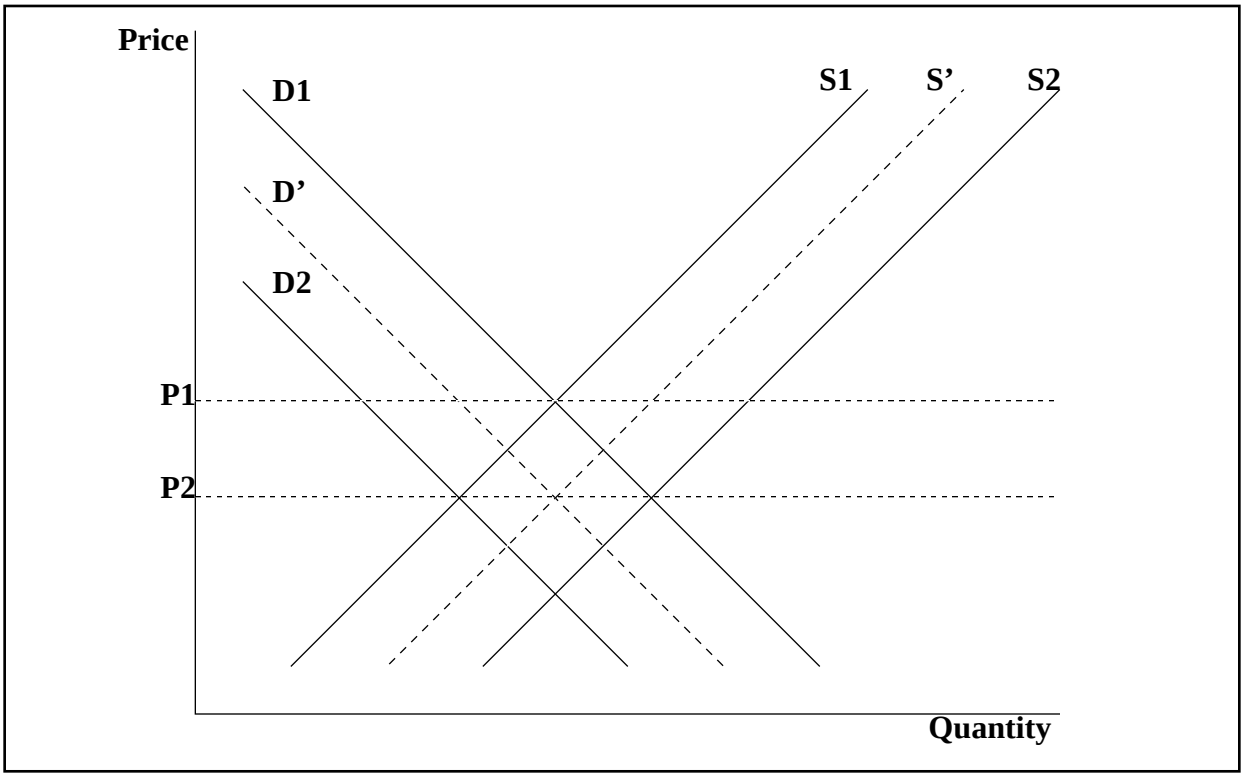
Such factors may, however, be used to rationalize pay discrimination. For, though social scientists may hypothesize a relationship which statistically explains a large portion of the thirty-odd-cent gap as caused by differences in these PRFs, the writer, for one, does not accept that they should be held *ipso facto* to **justify** any part of the gap.

"Identification Problem"

Part of what seems to be wrong with these PRFs is that they are subject to the "identification problem". The identification problem is one that economists would rather not contemplate.

For example, as illustrated in Figure 1 below, which represents supply and demand for some good or other, the identification problem poses the following question: if you observe two prices that are different (P1 and P2), can you say whether the lower one (P2) is lower because of a lower demand schedule (D2), or because of lower supply schedule (S2), or both (S' and D')? In the absence of information about the supply and demand schedules, the answer, of course is that you cannot know from the evidence of price alone.

FIGURE 1. Identification Problem



Similarly, the PRFs, like prices, reflect a mixture of demand-related and supply-related components. So what aspects of observed pay differences are they supposed to be explaining?

"Job Evaluation"

Gunderson observes that studies of the earnings gap tend to show that the gap is smaller where "job evaluation" systems are utilized. This must be of some comfort to those who are charged with enforcing equal-pay legislation. Pay equality seems easier to install if "skill", "effort", "responsibility", and "working conditions" are each scored the same in two jobs under scrutiny.

However, one important difficulty with job evaluation as a basis for examining the current state of pay inequality is that the scores do not travel well. Indeed, often different evaluation panels will score the same job differently. Moreover, within a given panel charged with scoring jobs the final stages invariably involve not measurement but hard-bargaining and even horse-trading (i.e., judgment).

In addition, job evaluation runs into its own version of the identification problem by making judgments about the supply side from the demand side. For instance, the Canadian Human Rights Commission in its interpretation manual gives an example of how a job evaluation scheme might score "working conditions". In that example, they give a low score to what they call "standard office" and a much higher score to "continuous outside work". They also give a low score to "limited travelling" and a much higher one to "travelling up to 50 percent of the time".[9]

Surely, depending on the tastes of the individual worker, those scores could just as easily be reversed. Some might expect higher pay for being confined to an office, exposed to its environmental hazards. Others might happily accept lower pay if they had the chance to travel.

PROBLEM

In economists' terms, one way of interpreting the current push for pay equity is as an upward shift in the supply schedule of female labour – and, hopefully, in the corresponding demand schedule – by political action. Employers' reactions reflect their historical demand schedule for female labour, and their traditional assumptions about women workers' compliant behaviour.

What remains absent from contemporary schemes for redressing pay injustices is a widely accepted measure of "equal value", whether restricted to "equal work" only or more broadly defined.

Efforts hitherto have been devoted to establishing substantial identity at the level of various "job factors", spawning an entire industry to develop and purvey allegedly "bias-free" job-evaluation tools.

However, the aim is social justice, and justice must not only be done but must also be seen to be done. So, it can be argued that a criterion for a measure of work designed to establish justice is that it should, if possible, produce results that are felt by the employees concerned to be just.

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9. Canada. Canadian Human Rights Commission. **Methodology and Principles for Applying Section 11 of the Canadian Human Rights Act**. Ottawa, undated.

Several studies carried out over the past thirty-odd years indicate that Elliott Jaques' Time-Span of Discretion constitutes just such a measure.

PILOT STUDY

In real life, actual managers and their respective actual subordinates tend to agree almost exactly on the size of the subordinates' jobs and the value of their work. Unfortunately, real-life pay schemes often do not reflect this agreement.

In Jaques' initial work on the Glacier Project[10] in the late 40s and early 50s, and notably in Roy Richardson's research at Honeywell in the late 60s, the correlation between Time-Span of Discretion (TSD) and Felt-Fair Pay (FFP) has been extremely close. Richardson's research into manager-subordinate pairs showed in particular that the TSD of the subordinate as estimated by the manager correlated closely with FFP as assessed by the subordinate.

In order to explore the degree to which these findings apply with respect to female managers and subordinates, a research program was prepared by Alan Pearson Associates Inc. and executed during the summer and fall of 1986.

The Study Sample

The pilot-study sample consisted of the thirteen permanent members of a the unit reporting to the Director of Management and Organization Development in one of Alan Pearson Associates Inc.'s client corporations in Montréal, Québec.

The unit covered three managerial levels: five individuals reported direct to the director, including three managers, one consultant, and one secretary; of the three managers (all women), one supervised three professionals and one support person, another supervised two professionals, and the third supervised one secretary.

Of the thirteen, nine were women and four men. Members of the group ranged in age from 26 to 48 years.

Definition of Terms

In broad terms, Time-Span of Discretion corresponds to the sense of how much "rope" a manager gives to a particular subordinate in his or her role. Strictly speaking, the definition of Time-Span of Discretion is: the longest period which can elapse in a role before the manager can be sure that his or her subordinate has not been exercising marginally sub-standard discretion continuously in balancing the pace and quality of his or her work on a particular task in a multiple-task role, or on a sequence of tasks in a single-task role. This period in effect gives the maximum time during

10. Elliott Jaques, who headed the original research team from the Tavistock Institute of Human Relations which started working with the Glacier Metal Company in 1948, continued as consultant social-analyst to the firm (reporting to its Works Council) for over 30 years.

which the manager must rely upon the discretion of the subordinate and the subordinate works on his or her own.

Felt Fair Pay is that amount of pay that the subordinate considers appropriate compensation for the work he or she is required to do in that job. “Pay” in the case of this study referred to straight salary; differences in non-salary benefits of the employees concerned were assumed to be minor and proportional to salary. The strict definition of “pay” for these purposes is: total emolument for a standard workweek (that is to say, without overtime or other premium payments) including money payment plus the actuarial value of special emoluments in lieu of money, such as provision of cars or housing, special tax breaks, or health or life insurance policies, or share options.

Method

The method was to administer a questionnaire-based interview, which lasted approximately twenty minutes, to each respondent in his or her capacity as a subordinate, on Time-Span of Discretion and Felt Fair Pay. In addition, in order to check on the degree of agreement between manager and subordinate with respect to Time-Span and Felt Fair Pay, each manager participated in one such interview in respect of each of his or her subordinates. All of the research was carried out in person by the writer.

The questionnaires for the interviews were derived from those used by Roy Richardson in his 1960s Ph.D. research at Honeywell in Minneapolis[11]. They were concerned only with measuring the actual Time-Span characteristics and assessing Felt Fair Pay relating to the specific job of the subordinate in question in each case.

Before the field research began, the respondent group was brought together and briefed on the program. They were reminded that the underlying theory was concerned with the objective measurement of work and the subjective assessment of the value of that work. They were assured that this was a voluntary activity; none refused to participate. The interview program was carried out between July and October, 1986.

The questionnaires seemed to work extremely effectively and reliably. Respondents had little difficulty in grasping the unfamiliar concepts presented and in relating them to their own work situation.

The questionnaires were administered blindly, that is to say, no attempt was made to prompt the respondent to conform with any preconceived notion of what his or her response “should” be, based, say, on the other respondent’s assessment of the same job. Equally, no attempt was made after the event to harmonize responses between manager and subordinate, for example to achieve agreement on what the longest task actually was or what its expected duration really was. Even so, the degree of agreement, as represented by the correlation coefficients, was in the key respects spectacular.

11. Richardson, *op. cit.*

Comparison with Richardson's Research

Table 1 summarizes the correlation statistics derived from the twenty-six interviews based on the questionnaires (thirteen subordinates' questionnaires plus thirteen questionnaires administered to their respective managers about the subordinates' jobs). It also shows for comparison purposes the corresponding results of Richardson's research.

Table 1: Comparative Correlations

Comparison	Richardson (n=180)	Study Total (n=13)	Women (n=9)	Men (n=4)
TSDb:TSDs	0.86	0.96	0.68	0.99
FFPb:FFPs	0.80	0.80	0.65	0.90
TSDb:FFPs	0.86	0.73	-0.05	0.92
TSDs:FFPs	0.74	0.85	0.36	0.97
TSDb:FFPb	0.73	0.80	0.56	0.97

TDSb = Time-Span of Discretion of the subordinate's job as evaluated by the manager (boss)
TSDs = Time-Span of Discretion of the subordinate's job as evaluated by the subordinate
FFPb = Felt Fair Pay for the subordinate's job as evaluated by the manager (boss)
FFPs = Felt Fair Pay for the subordinate's job as evaluated by the subordinate

The second column of data gives the results of the entire study sample of thirteen jobs. The left-hand column gives Richardson's research results; the two right-hand columns, the results for subsets of the study sample based on gender.

Four of the five coefficients derived from this study sample equal or exceed those from Richardson's research. The study sample had a higher level of agreement between manager and subordinate on the Time-Span of each job and had an equal level of agreement on Felt Fair Pay for that job. Subordinates and managers were each more internally consistent on the relationship between Time-Span and Felt Fair Pay. Only on the "crossover" correlation (in row 3) between TSD as evaluated by the manager and FFP as assessed by the subordinate was this study sample's coefficient lower than the corresponding Richardson result; despite a correlation close to zero in respect of women's jobs alone, it nevertheless reached 0.73 for the study sample as a whole.

The degree of agreement between manager and subordinate on TSD (R=0.96) was fully one-tenth of a point higher than Richardson's results.

Analysis within the Study Sample

The two right-hand columns of Table 1 deal with subsets of the study sample, namely, "women" and "men". One must admit that these are tiny subsets, but they do suggest interesting possibilities.

The reader will note the extremely high coefficients in the “men” column. By contrast, even the highest coefficients in the “women” column run about three tenths of a point below the “men”. This, combined with virtually zero correlation on the “crossover” noted above, seems to indicate somewhat less clarity about the size of women’s jobs, along with far less agreement on what they are worth in relation to Time Span. No comparative data are available from Richardson’s research, which dealt with an all-male sample.

Given the small size of the samples involved in this study, the significance of the statistics derived from it merits some attention. Table 2 below shows for each correlation the upper and lower limits at the 95 percent confidence level, as well as the correlation coefficient itself.

Table 2: Confidence Limits of Sample

Comparison	Full Sample (n = 13)			Women (n = 9)			Men (n = 4)		
	95% lower	Coeff.	95% upper	95% lower	Coeff.	95% upper	95% lower	Coeff.	95% upper
TSDb:TSDs	0.86	0.96	0.99	0.02	0.68	0.93	0.46	0.99	1.00
FFPb:FFPs	0.44	0.80	0.94	-0.03	0.65	0.92	-0.48	0.90	1.00
TSDb:FFPs	0.29	0.73	0.91	-0.69	-0.05	0.64	-0.38	0.92	1.00
TSDs:FFPs	0.55	0.85	0.95	-0.40	0.36	0.82	0.13	0.97	1.00
TSDb:FFPb	0.44	0.80	0.94	-0.16	0.56	0.89	0.10	0.97	1.00

In this light, only at the level of the full sample are significant positive correlations virtually assured. Nevertheless, the key correlation, TSDb:TSDs, is most unlikely to be below 0.86 in the total population. Equally, TSDs:FFPs, the degree of consistency between subordinates’ assessments of the size of their respective jobs versus what those jobs are worth, seems to indicate a solid positive correlation in the total population.

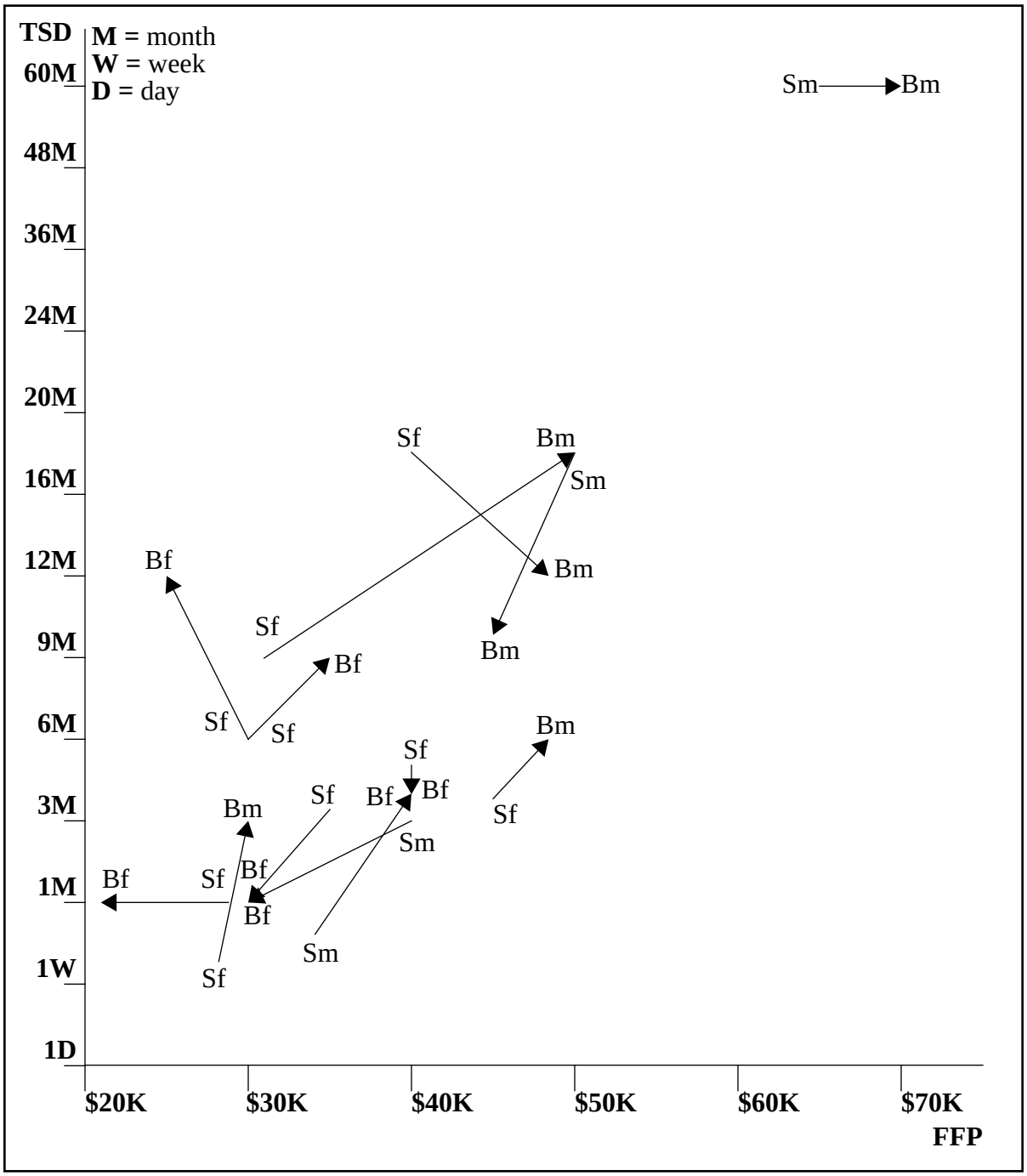
TSDb:FFPb, FFPb:FFPs, for the full sample, along with TSDb:TSDs for the tiny male subsample, indicate a good chance of high correlations in the total population. However, the “crossover” correlation, TSDb:FFPs, even in the full sample shows slightly less chance of being reliably high.

Beyond these, the lower confidence limits allow for the possibility of much lower correlation coefficients in the total population. However, even these indicators must be considered strongly suggestive, given a total sample of only thirteen data points. The hypotheses studied in this modest sample surely deserve to be reviewed on a larger scale.

Figure 2, below, shows a scatter diagram of the data points of the study sample, with TSD on the vertical axis and FFP on the horizontal. Two generalizations suggest themselves. First, for any given TSD, the left-hand, or lowest, FFP estimate will be made by a woman. Second, for any given job (represented by an arrow on the diagram), a male manager’s estimate will lie to the right

of the his female subordinate's (i.e., the male manager puts a higher value on the job than does the female incumbent), or the female subordinate's estimate will lie to the right of the female superior's (i.e., the female manager puts a lower value on the job than does the female incumbent).

FIGURE 2. TSD and FFP: Scatter Diagram of Estimates



Key: Bf = TSD/FFP estimate by female manager (boss); Bm = TSD/FFP estimate by male manager (boss)
Sf = TSD/FFP estimate by female subordinate; Sm = TSD/FFP estimate by male subordinate

The above analyses based on gender are necessarily tentative but show interesting possibilities. Meanwhile, the results for the total study sample, men and women included, tend to corroborate strongly Jaques' principal contentions, namely that managers and subordinates generally agree quite closely on the size of a given job measured in Time-Span, that they generally agree on what is appropriate pay for that job, and that, in particular, the correlation between TSDb and FFPs, representing the "crossover" between the manager's measure of the size of the job and the subordinate's assessment of appropriate pay, though tentative, is quite high.

Readers familiar with complex, sophisticated job-evaluation techniques, and the indifferent degree to which the pay levels they produce elicit the approval of those to whom they are applied, will be impressed that Time-Span – a single, objective, easily measurable parameter – can achieve such a high level of broad approbation.

In general, subordinates' estimates of their Time-Span seemed to correlate quite highly with their own Felt Fair pay judgments (R=0.85). For men subordinates, however, the corresponding correlation coefficient was as high as 0.97, while for women the correlation coefficient was only 0.36, reflecting apparently some combination of relatively low estimates of TSD along with comparatively low pay expectations.

The managers, too, were inconsistent in valuing women's jobs. On the one hand, for men's jobs the correlation between TSDb and FFPb paralleled that of male subordinates (R=0.97). By contrast, the corresponding correlation coefficient for managers' assessments of female subordinates' jobs was a mere 0.56, albeit a somewhat higher degree of coherence than in female subordinates' own estimates.

Indications from this small survey were that managers and male subordinates tend to agree very closely among themselves and with each other about the value of men's jobs and about TSD as a measure of work that correlates highly with Felt Fair Pay. (All correlation coefficients reached 0.9 or higher.)

Managers and female subordinates, however, showed much less consensus. And women amongst themselves seemed less able than their managers to converge on a scale of value for their jobs.

This is fine-grained analysis for a survey of only 13 individuals. However, it poses some interesting questions worthy of further research. For example: Is the supply schedule of women's labour coherent but merely below that of men? Or, as suggested by this pilot study, is it not only below but also diffuse, unclear, perhaps inchoate?

The abiding image of this study is that of the comet-tail. For a given TSD, the men will be tightly clustered around a particular level of FFP, while the women will be strung out on the left, unfocused but averaging substantially lower expectations.

If true, this is an indication of two internal political challenges for the Women's Movement, as it strives to persuade employers to act equitably and reward women fairly in relation to the value of their contribution:

- not only do women's pay expectations need to be raised to put their labour supply schedule on a par with men's,
- but also what appears to be their collectively diffuse sense of self-worth on the job needs to be brought into sharper focus for effective market leverage.

PROPOSAL

The results of the pilot study described above raise issues that need more thorough examination, for example:

1. whether, and to what extent, male manages systematically downgrade women's jobs, i.e., to what extent male managers underestimate TSD in relation to their female subordinates' estimates, as compared with their male subordinates' TSD estimates;
2. whether, and to what extent, female subordinates generally have consistently lower pay expectations than their male counterparts do, i.e., to what extent female subordinates have a lower FFP that their male colleagues for a given TSD.

It is proposed, therefore, that statistically significant studies be undertaken:

1. to replicate, and thus to corroborate or refute, Richardson's statistically sophisticated U.S. research; and
2. to extend the hypotheses to be tested to include such hypotheses as:

- Do high correlations between TSD and FFP appear in cohorts of women when

  a) the manager is a man and the subordinate a woman;

  b) the manager is a woman and the subordinate a woman;

  c) the manager is a woman and the subordinate a man; as well as in cohorts of men when

  d) the manager is a man and the subordinate is a man?
- Are sets a), b), c), and d), above significantly different, or are they conceivably subsets of the same population?
- Do the correlations hold up between establishments, firms, industries, and geographical locations, or are they not conceivably subsets of the same population?
- If not, within what limits does TSD outperform job-evaluation point-scores (by factor or in total), actual pay, and other potential independent variables, such as those identified by Richardson[12], in relation to FFP?
- Do specific FFP values attach to specific TSD values across the board? [If they did so, this would imply that universal pay grades would be feasible.]

The pay-off for such research would potentially be a single, simple measure of work equivalence, perhaps of universal application, perhaps applicable only within certain zones of external compa-

12. See Richardson, *op. cit.*

rability, e.g., based on regional or urban/rural location, on industry group or sector, etc. In any case, competitive methods for establishing equal value would be tested against each other, and the most equitable identified.

Once carefully conceived for sampling and computation, any such study could be carried out in waves, each of which would add to the database and be comparable pairwise with previous waves. This process of successive waves would constantly test TSD against competing measures of equivalence considered usable in assessing "work of equal value", including "equal work".

PROJECT PLAN

The initial phase of the work would involve preparing a suitable computing package and designing codes and survey instruments that would provide for comparability of sample results from wave to wave and from region to region, and for statistical rigour in the comparative analysis within and among waves.

A second phase (the first wave of the survey) would entail selection of sample workforces, identification of respondents, selection and training of interviewers, interviewing of respondents, and compilation and analysis of results.

In any such study, this second phase should be large enough to establish conclusively failure of the main hypothesis (namely, that Time-Span outperforms any other independent variable or combination of variables as a determinant of Felt Fair Pay), should the data so indicate. But, by the same token, it should be modest enough to be worth the expense of eliminating from the scene whichever plausible but inferior measures of "equal value" may be identified.

If, in the result, the survey data tend to corroborate the main hypothesis regarding the relationship between TSD and FFP, subsequent waves may be undertaken to test more particular hypotheses that would help to identify the practical limits of TSD measurements as indicators of "equal work" and "work of equal value".

Ultimately, and hopefully sooner rather than later, one might demonstrate a convincing, measurable way for justice to be done – and be seen to be done – in the realm of relative pay for women and men.

APPENDIX A: DEFINITION OF TYPES OF JOB EVALUATION PLANS[13]

Job evaluation plans are procedures to analyze and assess jobs in order to determine their relative worth, using assessments as a basis for grading and pay structure. Examples of job evaluation plans are ranking, grade description, factor comparison, and point rating schemes. These types are described below:

Ranking	The jobs in the organization are placed in order (ranked) on the basis of the importance to the organization or general difficulty. This system ranks each whole job against another whole job.
Grade Description	The jobs in the organization or occupational group are compared as whole jobs against a set of definitions of varying degrees of difficulty. The jobs are in effect ranked in terms of these levels.
Factor Comparison	Jobs are broken down into their component factors, e.g., skill, initiative and judgment, working conditions – and these factors are weighted by percentages or dollar amounts. Key jobs, or benchmarks, are selected and similarly broken down into factors. The other jobs are compared to these on a factor-by-factor basis and ranked accordingly.
Point Rating	The compensable factors are determined and defined and then divided into a number of degrees, and each degree is defined. Jobs are compared factor by factor against the degree definitions, and the closest degree is determined. Each degree of each factor has a point score attached to it, and the total point score for the job determines its "point band" or level.

13. Source: Ontario. Minister Responsible for Women's Issues. **Green Paper on Pay Equity**. Toronto, November, 1985.

APPENDIX B: BIBLIOGRAPHY

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The establishment and operation of a world-wide society of academics, business users and consultants interested in science-based management to improve organizational effectiveness for the purposes of:

Promoting among existing users increased awareness, understanding and skilled knowledge in applying concepts of Levels of Work Complexity, Levels of Human Capability, Accountability, and other concepts included in Requisite Organization and/or Stratified Systems Theory.

Promoting among potential users of the methods, appreciation of the variety of uses and benefits of science-based management, and access to resources.

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