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WHAT ECONOMISTS THINK

A Confusion of Economists?

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Following the 1977 meetings of the American Economic Association, *Business Week*, in an editorial entitled "The Furniture Movers," suggested "[t]here was no evidence of either humility or competence at the AEA meeting. Nor did any economist or group of economists offer anything resembling a new idea for addressing the major policy dilemma of the industrial West . . . [i]nstead, the sessions were dominated by papers seeking to refine methodologies that already have been proven ineffective . . . like their counterparts, the moving men, economists collect money and hours for pushing the furniture around . . ." This observation reflects an often heard theme about what the economics profession has to communicate—that it is overly concerned with questions which are obscure, arcane, irrelevant, theoretical, academic, etc., and which are consequently "unimportant."

A second, common, perception of economics and economists is that there is widespread and serious disagreement about "important" issues and hence that economists can contribute little to analysis, solutions, or understanding of these issues. Indeed, this perception is part of our folklore: "If parliament were to ask six economists for an opinion, seven answers would come back—two, no doubt, from the volatile Mr. Keynes" (see Paul Samuelson, p. 1628).

In part, the profession is a source of this perception of disagreement. For example, Edwin Dale noted that Britain's decision to join the common market generated the following exchange of letters to the *London Times*. One letter with 154 signatures of economists arguing that "the economic effects of joining the common market . . . are more likely to be unfavorable than favorable to Britain," was followed by a second letter from 142 economists which concluded "the economic effects of joining the common market . . . are more likely to be favorable than unfavorable to Britain" (Oct. 22, 1971). (A Mr. Peter Sieber then wrote to suggest that "the economic effects of economists . . . are more likely to be unfavorable than favorable to Britain" (Oct. 25, 1971).) Dale commented that the United States had witnessed a battle between monetarists and fiscalists "while the economy was going to pot" and, he continued, "[a]bove all, possibly unfairly, we have had a rise in skepticism about what economists can tell us . . ." He concluded by asking, "are we seeing the decline and fall of the economists' empire?" Similarly, *Business Week* suggested that it was observing the "intellectual bankruptcy of the profession."

These perceptions of irrelevance and/or disagreement may, unfortunately, be used by policymakers to justify the abandonment of analysis and the adoption of simplistic and perhaps superficial answers to complex problems where potential insights might be obtained with economic analysis. The image of irrelevance can only be dispelled by experience with serious applied analysis. However, the image of widespread disagreement may not be a misperception at all. Whether it is or not, and the possible sources of the disagreement are considered in this paper.

I. Hypotheses

In thinking about the problem of widespread perceived disagreement among econo-

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mists, we outlined two *ex ante* hypotheses:

1) There would be widespread consensus about questions which were more clearly of a micro-economic nature and less consensus about those with a macro-economic orientation.

2) There would be greater consensus about questions of what *can* be done than about those concerned with what *ought* to be done. This can-ought to split we thought of as loosely analogous to a focus on positive issues (where theory might give direction) vs. normative issues (where value judgments might be important.)

In addition to an interest in the degree of consensus, we wanted to examine common response patterns across issues by groups of individuals. Others have also been concerned about the problems suggested in our introductory comments and have suggested alternative hypotheses about their source. Samuelson, for example, suggests that policy statements usually involve forecasting which is both difficult and an art form where esthetic sensibilities vary. He also argues that ethical ends dominate scientific judgments. There is not, however, much consensus even here: Milton Friedman argues that the lack of agreement is largely a result of differing scientific evaluations, not value judgment per se. He suggests other reasons including product differentiation, a natural desire to talk about differences of opinion and different rates of time preference. (According to Friedmen, advocates of limited government and free markets have a low rate of time preference relative to the advocates of government intervention.)

II. The Survey and Questionnaire

To investigate the questions raised above, a two-page mail-return format questionnaire was sent to a stratified random sample of 600 *U.S.* based economists selected from the 1974 *Directory of Members* of the American Economic Association. The strata included:

1. A random sample of 100 economists from among the full professors of economics in seven leading graduate programs.

2. A random sample of 200 other economists with academic appointments.

3. A random sample of 150 economists employed in government positions.

4. A random sample of 150 economists employed in the private nonacademic sector.

Each recipient was asked to indicate general agreement, agreement with provisions or general disagreement with each of thirty statements. A written response about the effectiveness and sophistication of economic journalism also was requested. While we shall not report upon these comments in detail, the 72 individuals who chose to respond felt (predictably) that the source of confusion was not with professional economists but with journalists. Economic journalism was described as inaccurate, biased, distorted, sensationalized, and unsophisticated. A fair summary of the comments was provided by one respondent who concluded, "All economic journalists must have taken introductory economics on a pass-fail basis."

We were concerned that hostility toward questionnaires among economists might limit the response. We were delighted with a better than 33 percent return; 211 individuals responded: 25 from the first stratum, 81 from the second, 48 from the third, and 57 from the last. (A *chi*-square test of those differences does not reach significance.)

We did not pretest the questionnaire, hence there are some propositions which respondents found inappropriate. While we did not solicit comments on propositions, many respondents chose to comment anyway. (Proposition numbers shown in italics throughout the paper are as defined in Table 1.) Proposition *11* (reduce defense spending) stimulated the heaviest response; only proposition *5* (flexible exchange rates) was without any written comment. The most serious criticisms concerned proposition *26* (Phillips curve)—respondents considered it either meaningless or misleading as written. Affirmative consensus was predicted if it had been worded, "A reduction in unemployment tends to produce a higher rate of inflation."

Table 1 reproduces the propositions and summarizes the responses. Table 2 provides a response breakdown by occupational stratum, assigning a score of 3 to agree, 2 to agree with provisions, and 1 to disagree.

TABLE 1—QUESTIONNAIRE AND RESPONSES
(Shown in Percent)

Propositions	Generally Agree	Agree with Provisions	Generally Disagree
1. Tariffs and import quotas reduce general economic welfare	81	16	3
2. The government should be an employer of last resort and initiate a guaranteed job program	26	27	47
3. The money supply is a more important target than interest rates for monetary policy	48	23	29
4. Cash payments are superior to transfers-in-kind	68	24	8
5. Flexible exchange rates offer an effective international monetary arrangement	61	34	5
6. The "Corporate State," as depicted by Galbraith, accurately describes the context and structure of the *U.S.* economy	18	34	48
7. A minimum wage increases unemployment among young and unskilled workers	68	22	10
8. The government should index the income tax rate structure for inflation	41	27	32
9. Fiscal policy has a significant stimulative impact on a less than fully employed economy	65	27	8
10. The distribution of income in the United States should be more equal	40	31	29
11. National defense expenditures should be reduced from the present level	36	30	34
12. Antitrust laws should be used vigorously to reduce monopoly power from its current level	49	36	15
13. Inflation is primarily a monetary phenomenon	27	30	43
14. The government should restructure the welfare system along lines of a "negative income tax"	58	34	8
15. Wage-price controls should be used to control inflation	6	22	72
16. A ceiling on rents reduces the quantity and quality of housing available	78	20	2
17. The Fed should be instructed to increase the money supply at a fixed rate	14	25	61
18. Effluent taxes represent a better approach to pollution control than imposition of pollution ceilings	50	31	19
19. The government should issue an inflation indexed security	33	25	42
20. The level of government spending should be reduced (disregarding expenditures for stabilization)	34	23	43
21. The Fed has the capacity to achieve a constant rate of growth of the money supply if it so desired	35	41	34
22. Reducing the regulatory power of the *ICC*, *CAB* et al. would improve the efficiency of the *U.S.* economy	47	31	22
23. The federal budget should be balanced over the business cycle rather than yearly	53	30	17
24. The fundamental cause of the rise in oil prices of the past three years is the monopoly power of the large oil companies	11	14	75
25. The redistribution of income is a legitimate role for government in the context of the *U.S.* economy	52	29	19
26. In the short run, unemployment can be reduced by increasing the rate of inflation	31	33	36
27. The fiscal policy proposed by the Ford Administration for the coming year is too restrictive	40	19	41
28. The ceiling on interest paid on time deposits should be removed	76	18	6
29. "Consumer protection" laws generally reduce economic efficiency	24	28	48
30. The economic power of labor unions should be significantly curtailed	32	38	30

TABLE 2—RESPONSE PATTERNS

Proposition	All			Academic 1			Academic 2			Total Academic			Government			Business		
	Mean	SD	#	Mean	SD	#	Mean	SD	#	Mean	SD	#	Mean	SD	#	Mean	SD	#
1	2.8	49	206	2.8	.44	24	2.8	.53	77	2.8	.51	101	2.7	.54	48	2.8	.43	57
2	1.8	.82	204	1.7	.71	23	1.8	.85	78	1.8	.82	101	2.0	.83	46	1.6	.76	57
3	2.2	.86	199	1.6	.82	24	2.3	.85	73	2.1	.88	97	2.2	.82	46	2.4	.84	56
4	2.6	.64	203	2.8	.41	25	2.7	.58	76	2.7	.54	101	2.6	.65	48	2.4	.77	54
5	2.6	.59	208	2.6	.64	25	2.6	.60	78	2.6	.60	103	2.5	.54	48	2.1	.88	56
6	1.7	.75	198	1.2	.52	25	1.9	.80	70	1.7	.79	95	1.8	.71	48	1.6	.73	55
7	2.6	.67	206	2.8	.53	24	2.6	.66	78	2.6	.63	102	2.4	.80	48	2.7	.61	56
8	2.1	.85	201	2.0	.85	23	2.1	.84	75	2.0	.84	98	2.1	.86	47	2.1	.88	56
9	2.6	.65	206	2.8	.56	24	2.5	.66	77	2.6	.65	101	2.6	.58	48	2.5	.71	57
10	2.1	.83	202	2.5	.67	23	2.2	.82	77	2.3	.80	100	2.1	.81	45	1.8	.79	57
11	2.0	.84	198	2.0	.72	22	2.1	.86	76	2.0	.83	98	2.2	.79	44	1.3	.86	56
12	2.3	.73	206	2.5	.66	25	2.5	.70	77	2.5	.69	102	2.3	.71	48	2.1	.78	56
13	1.8	.83	203	1.7	.81	23	1.9	.84	77	1.9	.83	100	1.7	.77	47	1.9	.87	56
14	2.5	.65	205	2.5	.65	25	2.5	.68	76	2.5	.67	101	2.5	.58	47	2.4	.65	57
15	1.3	.59	208	1.4	.71	25	1.4	.59	78	1.4	.62	103	1.4	.61	48	1.2	.52	57
16	2.8	.48	207	2.8	.41	24	2.7	.53	78	2.7	.50	102	2.7	.51	48	2.8	.41	57
17	2.5	.72	202	1.3	.70	24	1.7	.76	77	1.6	.76	101	1.4	.69	46	1.5	.69	55
18	2.3	.77	201	2.6	.49	25	2.5	.70	77	2.5	.66	102	2.0	.87	47	2.2	.79	52
19	1.9	.86	197	2.2	.87	25	1.9	.89	72	2.0	.88	97	1.8	.87	46	1.7	.81	54
20	1.9	.88	200	1.6	.83	24	1.8	.89	76	1.7	.87	100	1.9	.83	46	2.3	.80	54
21	2.1	.76	200	2.0	.75	24	2.2	.75	75	2.2	.75	99	2.1	.78	45	2.1	.76	56
22	2.2	.80	202	2.3	.81	23	2.3	.74	77	2.3	.75	100	2.1	.87	47	2.3	.81	55
23	2.3	.77	201	2.2	.90	23	2.4	.72	76	2.3	.77	99	2.3	.81	46	2.4	.73	56
24	2.3	.77	201	1.0	.20	24	1.5	.82	79	1.4	.77	102	1.4	.75	47	1.3	.65	55
25	2.3	.78	204	2.7	.61	25	2.4	.72	76	2.5	.70	101	2.3	.78	46	2.0	.82	57
26	2.0	.82	200	2.3	.90	24	2.1	.75	75	2.2	.79	99	1.9	.86	47	1.7	.75	54
27	2.0	.90	199	2.3	.92	24	2.0	.92	75	2.1	.93	99	2.1	.86	45	1.7	.84	55
28	2.7	.57	203	2.7	.61	25	2.7	.53	75	2.7	.55	100	2.8	.52	47	2.6	.65	56
29	1.8	.82	203	1.7	.86	24	1.8	.83	78	1.8	.83	102	1.6	.72	46	1.9	.80	57
30	2.0	.79	204	1.8	.78	23	2.0	.80	78	2.0	.79	101	2.0	.76	46	2.1	.80	57

Note: 1 = disagree, 2 = agree with provisions, 3 = agree.

Consensus was assessed by calculating an information theory measure, relative entropy (or its compliment, redundancy). This measure of consensus has a range from zero (no consensus) to one (perfect consensus). One interpretation of the measure is that questioning more than one economist would be redundant for questions with relatively high consensus. Conversely, for propositions with low measures, members of the profession can be regarded as entropic or without pattern in their responses.[1]

[1]Relative entropy is defined as actual entropy divided by the maximum possible entropy for the number of outcomes considered, where entropy is the sum of the probability of a particular outcome times the *log* to the base 2 of the probability, i.e., $(-\Sigma p_i log_2 p_i)$. One of the clearest discussions of this measure is found in W. R. Garner. We have found "redundancy" to be relatively insensitive to minor differences in proportions and to require really strong contrasts before large measures of redundancy are obtained.

Table 3 provides the redundancy calculations associated with each proposition in the survey. Since a few individuals refused to answer each proposition within the format provided or did not respond at all, a fourth response category was created, hence four different redundancy calculations are reported.

The scores among the response categories are highly correlated, although different orderings of the propositions result from each measure. The difficulty with the first measure is that only those who "initiated" the fourth alternative generated response in the "other" category. Those who might have done so if it were an option, but who felt constrained to

TABLE 3—REDUNDANCY MEASURES

Proposition	(2)	(3)	(4)	(5)	(6)
16	.54	.47	.81	.86	32/1
1	.53	.48	.76	.81	24/1
5	.37	.25	.73	.71	13/1
28	.42	.38	.73	.68	13/1
4	.44	.27	.50	.60	8/1
14	.30	.19	.44	.60	7/1
9	.35	.23	.47	.56	7/1
7	.37	.25	.44	.53	7/1
12	.24	.08	.20	.38	1/3
23	.18	.08	.17	.32	3/1
18	.17	.08	.16	.32*	3/1
25	.21	.08	.16	.30	2/1
22	.16	.04	.10	.24*	2/1
21	.14	.09	.04	.22*	2/1
24	.42	.23	.44	.20**	1/7
15	.43	.38	.60	.15**	1/12
3	.14	.04	.04	.13	2/1
30	.16	.01	.01	.12	1/1
10	.14	.01	.02	.12	1.5/1
8	.13	.01	.01	.10	1.3/1
11	.11	0	0	.08	1/1
26	.12	0	0	.06	1/1
17	.26	.16	.30	.03**	1/4
2	.18	.05	.08	.03	1/2
20	.14	.03	.01	.02	1/1.3
27	.14	.05	.01	.02	1/1
19	.11	.02	.01	.02	1/1.3
13	.21	.02	.04	.01	1/1.5
29	.16	.04	.08	.00	1/2
6	.17	.05	.16	.00	1/3

Note: Column (2) considers four categories: "generally agree," "agree with provisions," "generally disagree," and "other." Column (3) reports the redundancy measures when those who fail to respond within the prescribed format are simply omitted from the sample. Column (4) considers only "generally agree" and "generally disagree" categories and reduces the total sample size accordingly. Column (5) reports redundancy measures under the assumption that all "agree with provisions" responses would fall in the "generally agree" category if only two choices were offered. The ratio of agree to disagree according to the definition of column (4) is also reported in column (6).

answer within the format, are excluded from the category and included elsewhere. Redundancy measures in column (2) reflect that difficulty, since none of them are particularly high. The third column essentially assumes that all those who did not respond within the format provided should not be used to differentiate opinions even though they may have entertained opinions of their own. It also assumes that "agree with provisions" is a distinctly different response than "generally agree."

Columns (4) and (5) in this table are likely the best measures of consensus, depending upon how one wants to consider the differences between "agree" and "agree with provisions." The assumptions utilized for columns (4) and (5) tended to heighten their consensus score, earlier column assumptions pulled their scores down. The fifth column in particular has some interesting redundancy measures. (Scores distinguished by ** are those where a large number of respondents disagree with the proposition, a very small number agree but a

fair number fell in the category "agree with provisions." Scores distinguished by * are those where a large group placed themselves in the "agree with provisions" category and where slightly more chose the "agree" over the "disagree" category.)

Of the thirty propositions, there are twenty with significant consensus at the .01 level: fourteen propositions with which economists agree and six propositions with which economists disagree. Another three propositions (identified by * in the following lists) reach the .05 level of significance. (We used a Kolmorgorov-Smirnov test of the proposition that the middle category, "agree with provisions," falls half way between the "generally agree" and "generally disagree" category. If the middle category is considered to be closer to the "generally agree" category, the number of consensus items would increase. Our conclusions hold under a *chi*-square test also.)

Those issues upon which there is significant consensus and agreement with the proposition as stated include: *1* tariffs; *16* rent controls; *28* interest rate ceilings; *7* minimum wage; *4* cash vs. transfers-in-kind; *9* fiscal policy stimulus; *5* flexible exchange rates; *14* negative income tax; *25* legitimacy of redistributional role; *23* cyclical budget balancing; *18* effluent taxes vs. ceilings; *12* antitrust; *22* regulatory bodies and efficiency; *3* money vs. interest rate targets; *21** money rule is achievable.

Those with significant consensus and disagreement with the stated proposition are: *15* wage-price controls; *24* oil prices and monopoly; *17* pursue money rule; *2* employer of last resort; *29* consumer protection; *6* Galbraith's views; *20** reduce government spending; *13** inflation as a monetary phenomenon. The last proposition (*13*) was however labeled as meaningless by several respondents.

It is clear that economists have reached consensus on many economic issues—a contradiction of the popular image of confusion and disagreement on any issue. However, it would be specious to conclude that we have measured the level of consensus in the profession in general, since we would have to first demonstrate that the thirty propositions were a random selection of all possible economic issues, something we obviously cannot do.

III. Tests of Hypotheses

To test our *ex ante* hypotheses about more agreement on micro-economic propositions than on macro-economic propositions and about more agreement on propositions worded with "can" than on those worded with "should" we created the following matrix of propositions:

Micro "should": *12* antitrust; *22* regulation and efficiency; *28* interest rate ceilings; *29* consumer protection; *30* union power.

Macro "should": *2* employer of last resort; *8* tax indexation; *14* negative income tax; *17* pursue money rule; *19* bond indexation; *23* cyclical budget balancing; *27* Ford's fiscal policy.

Micro "can": *1* tariffs; *4* cash vs. in-kind transfers; *5* flexible exchange rate; *7* minimum wage; *16* rent controls; *18* effluent taxes.

Macro "can": *3* money vs. interest-rate targets; *9* fiscal policy stimulus; *13* inflation as monetary phenomenon; *21* money rule is achievable; *26* Phillips curve.

We excluded proposition *15* wage-price controls, which, although basically micro, has macro implications. The high degree of consensus on this question strengthens the results if grouped with the micro propositions, and only slightly weakens them if it is included with the macro questions.

A 2 x 2 analysis of variance with the redundancy score as the dependent variable results in an F of 9.87 for the micro-macro factor and an F of 6.20 for the can-should factor each with 1 and 19 degrees of freedom. On this basis we reject the hypothesis of micro-macro similarity of response at the .01 level of significance and the should-can similarity of response at the .05 level. The interaction is not significant ($F = 2.921$). The survey seems to support our hypotheses that there is more consensus about micro issues than macro issues and that "can" propositions generate more consensus than "should" ones.

It is clear that those issues which involve interference with the price mechanism and exchange tend to elicit a consensus response. Six of the first seven high consensus items in Table 3 are "price-control" type issues. Of the first ten high consensus items, nine are quite clearly propositions with micro-economic foundations. Proposition *9* (fiscal policy works with less than fully employed resources) is the only intruder, with proposition *17* (the Fed should pursue a money rule) ranking eleventh.

Another way to look at differences in response patterns is to group propositions about similar issues. Consider, for example, those about interferences with the price mechanism, those about fiscal policy, those about monetarist propositions and those about income distribution.

Anyone questioning members of our sample about interferences with the price mechanism would find virtual unanimity of response about their effects (propositions *1*, *7*, *15*, *16*, *28*, and possibly *5*). Moreover, normative judgements matter less here than elsewhere—there was consensus that existing interferences *ought* to be eliminated. In a sense this is supportive of Friedman's hypothesis, value differences being of less importance than differences in what is regarded as theoretically warranted. There was, however, stronger support for the proposition that reducing regulatory power of certain agencies would improve efficiency than for the proposition that consumer protection laws reduce efficiency.

There was consensus that fiscal policy could stimulate the economy and that the budget ought to be balanced over the cycle rather than yearly. There was more diversity of opinion about the appropriateness of the then current fiscal policy and about a possible inflation-unemployment tradeoff.

That the Fed *could* achieve a money rule and that it ought to look at monetary aggregates rather than interest rate targets was generally agreed upon. However, there was also agreement that the Fed *should not* pursue such a rule. There was widespread disagreement about the source of inflation or at least about its source being primarily monetary.

Economists differ little in their opinions that cash is superior to transfers-in-kind and, correspondingly, that the welfare system ought to be restructured along the lines of negative income tax. Redistribution of income was thought to be a legitimate role of government; however, there was less agreement about the current need to redistribute.

Still another way to look at the differences in response patterns is to look for common patterns of response by groups of individuals across all of the propositions. We used factor analysis[2] as a way of examining these common response patterns. The dominant factor, no matter how the sample was cut, was one that indicated correlated agreement with (loadings are in parenthesis): *20* a reduction in government spending (.74); *30* curbs on union economic power (.64); *13* inflation as a monetary phenomenon (.58); *29* consumer protection laws as antithetical to efficiency (.58); *17* the money rule (.58); *22* a reduction in regulatory power as enhancing efficiency (.57); *3* money supply as the important target for monetary policy (.50); and correlated disagreement with: *27* Ford's fiscal policy being too restrictive (.76); *2* the government as an employer of last resort (.72); *10* the necessity of a more equal distribution of income (.63); *25* wage-price controls (.58); *11* reduction in national defense (.57); *6*

[2]Factor analysis suggests the nature of the hypothetical constructs underlying a larger set of empirically obtained variables. As such it is essentially a data reduction and clarification technique. Each factor is characterized by a pattern of loadings for particular empirical variables, the loadings being the correlations with the hypothetical constructs. The procedure determines the fewest possible constructs from the reliable variance in the correlation matrix. The principal components method produces orthogonal factors, each succeeding factor accounting for the maximum amount of variance possible given the pattern of correlations in the correlation matrix. Unless there is a single factor it is usually not parsimonious. The verimax rotation, which retains the criterion of orthogonality, maximizes the clarity of each factor and the purity of each variable's loading on the factor with which it is most associated. This simplifies the interpretation of the factor. An excellent discussion is found in Fred Kerlinger; more detail is available in Harry Harman.

Galbraith (.56); *9* fiscal policy having a stimulative effect (.50). (Combining "agree" and "agree with provisions" does not change the character of the first factor.)

Clearly this factor could be identified with the Chicago School. It shows correlation among politically conservative propositions with a prime focus on monetary policy (particularly the money rule). However, while a nonintervention position may extend to include the money rule, etc., there is no simple connection between these positions and concurrent views about the importance of deregulation, no-income-redistribution policies, or a position on national defense spending. The factor as a whole reflects a political ideology as its dominant theme which only incidentally incorporates a particular theoretical position about the role of money in an economy. It is also interesting that for the total sample curbing the economic power of labor unions is important, but vigorous pursuit of antitrust policy is not (does not appear to be correlated with the listed responses).

The dominant factor under a different (verimax) rotation was also ideological although of a clearly different bent. It indicated consistent correlated agreement with: *6* Galbraith (.77); *24* importance of oil companies monopoly in recent price increases (.70); *11* decrease in defense spending (.61); *2* employer of last resort (.51); *10* distribution of income should be more equal (.43); *15* use of wage-price controls to curb inflation (.41). There were no substantial negative loadings in the factor.

This factor is obviously toward the other end of the ideological spectrum from the first principle component. A surprising aspect of the factor analysis is that it was not capable of explaining much of the variance (18 percent, at most, of the variance could be attributed to either first factor). There are two possible explanations. First, there is simply not much variance in the responses to the micro questions where there was broad consensus across the profession. Hence, this correlated grouping does not appear in the factor analysis. Second, our propositions appear to have hit at enough different values to give very different response patterns individual by individual on macro and particularly on should-type propositions.

IV. Differences Across Occupations

The stratified sample allows for an examination of different response patterns depending upon employment in government, business, general academic or "mentor" academic positions. We were also interested in a more aggregated breakdown which contrasts economists with academic appointments against those in the other two occupations.

Considering first the four employment types, we found that there were significantly different response patterns on only ten of the thirty propositions using a *chi*-square test (the statistic ranges from 20.88 to 13.47, 6 df). It is possible to have group consensus and a significantly different response pattern between employment types, if, for example, the majority of respondents in each strata agree, say, but one group is almost unanimous while the others have more variance in their responses. The more interesting propositions are those in which the differences in response patterns emerge because of patterns of consensus among an employment group that are opposite patterns of consensus among another group(s).

Of the ten propositions with different patterns by employment the two most divergent are for propositions about macroeconomic policy (*26*; *20*). These are followed by the propositions concerning the distribution of income in the economy (*25*; *10*). An appropriate approach to pollution (*18*), Galbraith's description of the *U.S.* economy (*6*), and the role of the oil companies in oil price increase (*24*) also generate differences. The other propositions (*3*; *37*; *9*) are all about macro-economic issues.

The following is a general summary of the differences.[3] When there is consensus on a proposition it is much stronger for the sample

[3]A more detailed statistical breakdown is available from the authors upon request.

of full professors at the seven leading graduate schools than for any other sample. For example, on proposition *24* (concerning the oil price rise and oil company monopoly), 96 percent of the full professors disagreed with the proposition, as contrasted with 65 percent of other academic economists and slightly larger percentages for business and government economists. The differences between the strata, however, are more than simply a degree of consensus. Consider for example, the interesting differences between the two academic subsamples: A majority of the full professors disagree with the "Galbraithian Corporate State" view (80 percent) while the random sample of other academics finds a majority in agreement (60 percent). A similar split also happens for proposition *3* (about the relative importance of money and interest rate targets): 58 percent of the full professor mentor sample disagree with money as the prime target while 74 percent of the sample of other academics believe it to be the appropriate target. Examining other propositions one might conclude that the broader academic sample (younger?) included more people who were ideological, in the sense that the sample tended to be more "Chicago" and more "Galbraithian" and hence, more polarized into subgroups around ideologies.

For propositions *25* (redistribution is legitimate), *20* (reduce government spending), *10* (income redistribution), *3* (money vs. interest rate targets) and *27* (Ford's fiscal policy), academic economists reveal opinions of a distinctly different pattern from those employed in business. Somewhat surprising is the 50–50 split by business economists on the Galbraithian Corporate State view (remember, this view was strongly rejected by the mentor sample and accepted by a majority of those drawn from a larger academic sample). Put differently, splitting the sample into academic and nonacademic employments yields the following differences. The academic group is more in agreement with the notion that unemployment can be reduced by increasing inflation (*chi*-square 13.05 with 2 df), more prone to agree with the notion that the distribution of income in the United States should be more equal (*chi*-square of 10.28 with 2 df), and with the idea that government's role in income redistribution is legitimate (*chi*-square of 9.85 with 2 df). The nonacademic group, on the other hand, agrees more with the idea of reducing government spending (*chi*-square 12.28 with 2 df) and less with the idea of vigorous use of antitrust laws being necessary to reduce monopoly. Consistent with these positions, the nonacademic group rejects the notion that the Ford fiscal proposals were too restrictive.

It should be emphasized that there was no significant divergence of opinions between any strata on questions of a micro-economic nature. Indeed, given the nature of some of the propositions (for example, propositions about price supports), it is interesting how few interstrata differences there are.

V. Conclusion

Consensus tends to center on micro-economic issues involving the price mechanism while the major areas of disagreement involve macro-economic and normative issues. The normative nature of many issues also allows ideological considerations to become important. However, it is clear from this analysis that the perceptions of widespread disagreement are simply wrong. On the other hand, it is true that for many outside the profession the questions of greatest interest are also those that generate the most disagreement within the profession. Hence a good deal of the sampling of economists' advice, which is in turn communicated to the public, comes from the weakest cell in our analysis—macro-economic policy. The problems in this cell are undoubtedly exacerbated since many of the policy statements also involve forecasting of one sort or another. Put differently, the intersection of the greatest interest by the public and hence by journalists with what the profession "knows" occurs in the weakest cell.

In part, this returns us full circle. The difficulty lies, to a degree, not in what there is to communicate, but what is actually communicated and how it is communicated. Indeed, part of the problem is that we have not been successful in communicating what our weak-

est cell is. This, of course, is affected in an important way by the interaction between economists and journalists.

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