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Admission to the PhD Program in the Department of Psychology at the University of Oregon

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ABSTRACT: *The graduate admissions process at the University of Oregon is described, and some analyses of data from over 1,000 applicants are presented. Included in this report are some characteristics of accepted (9%) and rejected (91%) applicants and the probability of an invitation as a function of the applicant's undergraduate grade point average and Graduate Record Examination scores. Some conclusions and recommendations are presented, the most important of which is a plea for the rapid development of a centralized application system for all graduate programs.*

This informal report, originally prepared solely for the staff and graduate students at the University of Oregon, provides some information that may be useful for admissions committees at other institutions and for prospective applicants to psychology graduate programs throughout the United States. Hopefully, this article will stimulate reports of similar analyses from other institutions, so that admissions committees and applicants will have access to comparative data covering a wide range of American graduate schools. In addition, it is hoped that this report will provoke some further thought, and perhaps debate, on the fundamental issues relating to the graduate admissions process in psychology.

The University of Oregon Admissions Process: An Overview

When potential applicants inquire about the graduate program, they are routinely sent some descriptive literature, plus a packet of application materials. Somewhere between 4,000 and 5,000 individuals have so inquired in each of the past 4 years.

Applicants send, or arrange to have sent, the materials required: (a) a transcript of their undergraduate courses and grades; (b) their scores from the Graduate Record Examination (GRE); (c) application forms which, among other information, indicate the undergraduate institution(s) they attended, their status as a "majority" or "minority" (including foreign) student, and the particular program[1] in the department to which they are applying; (d) three (or occasionally more) reference forms, completed primarily by applicant-selected professors at their undergraduate institutions; and (e) a $10, nonreturnable processing fee, which is allocated to the general fund of the Oregon State System of Higher Education (and not—at least directly—returned to the University, much less the Psychology Department).[2]

On the basis of information provided in their application materials, a score on the department's "linear composite" is computed for each applicant. The formula for computing this score, which will henceforth be referred to as the Old Formula (OLD), is as follows:

$$\text{OLD} = 1.04\,\text{GPA} + .0045\,(\text{V} + \text{Q}) + .13\,\text{QI},$$

where GPA is the cumulative, undergraduate grade point average in all academic courses (A = 4, B = 3,

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[1] The four programs are clinical, developmental-personality-social (D-P-S), experimental, and physiological psychology.

[2] This fee is required as part of the procedure for applying to the Graduate School. For a number of years, the Psychology Department was able to process all applications prior to forwarding any materials to the Graduate School. As a consequence, during those years only students electing to come to the University of Oregon actually paid the fee. Between the 1973–1974 and the 1974–1975 applicant years, this informal procedure was terminated at the request of the Graduate School.

C = 2, D = 1, F = 0); V is the score on the verbal section of the GRE; Q is the score on the quantitative section of the GRE; and QI is an index of the quality of the applicant's undergraduate institution (on a scale from 1 to 6). The weights in this formula were derived some years ago by regressing the consensual ratings made by the Admissions Committee for each applicant onto these four potential predictors of academic success (Dawes, 1971).

For majority applicants, those with scores below 9.5 on the linear composite are immediately rejected and so notified. Majority applicants with scores on the linear composite of 9.5 or higher, plus all minority (including foreign) applicants, are *potential* candidates for selection by the staff members in each of the four programs within the department. The exact procedures for winnowing down the number of applicants to be assessed by the staff members in each program have varied slightly from year to year. In general, however, the folders of the potential candidates have been rated by the members of the Admissions Committee, and those with the highest ratings have then been turned over to the departmental programs for the final selection decisions. Because some of those invited will not opt to come to the University of Oregon, each program must select considerably more applicants than it has openings available.

Some Analyses of the Admissions Process

Over 1,000 individuals completed the application process during the 1973–1974 and the 1974–1975 academic years. The distributions for both the majority versus minority samples by year, by departmental program, and by admission decision are presented in Table 1.

There was roughly a 50% reduction in the number of completed applications between 1974 and 1975, ostensibly a function of our insistence on the $10 processing fee. The proportion of minority applicants each year remained the same. Over half (57%) of all applicants applied for the clinical program, another 20% for the developmental–personality–social, 15% for the experimental, and only 7% for the physiological program. Compared to their base rate, slightly more minority applicants applied for the developmental–personality–social and physiological programs, and slightly fewer for the experimental program.

Roughly 9% of the applicant pool were invited, and 91% were rejected. Approximately three applicants must be invited for every one applicant who accepts the invitation and elects to come to the University. While a greater proportion of minority (13%) than majority (9%) applicants were invited, more minority than majority invitees elected to go elsewhere.

The linear composite used as a preliminary screening index for majority applicants has already been described:

$$\text{OLD} = 1.04\,\text{GPA} + .0045\,(\text{V} + \text{Q}) + .13\,\text{QI}.$$

The materials sent to individuals who inquire about the University of Oregon's graduate program include a linear composite, which potential applicants can compute for themselves. This simplified composite (SIM) is identical to OLD except for the elimination of the last term in the formula:

$$\text{SIM} = 1.04\,\text{GPA} + .0045\,(\text{V} + \text{Q}).$$

Actually, SIM looks much more forbidding than it is. Since 1.04 is quite close to unity and .0045 is quite close to 1/200, SIM can be reduced to the following

TABLE 1: *Distribution of Applicants by Majority Versus Minority Status, Year of Application, Departmental Program, and Admission Decision*

Distributional category	No. majority applicants	No. minority (and foreign) applicants	Total no. applicants	% total	% minority
Year of application					
1973–1974	650	57	707	67	8
1974–1975	313	28	341	33	8
Departmental program					
Clinical	552	46	598	57	8
Developmental–personality–social	189	23	212	20	11
Experimental	154	7	161	15	4
Physiological	68	9	77	7	12
Admission decision					
Invited–accepted	33	2	35	3	6
Invited–declined	54	9	63	6	14
Rejected	876	74	950	91	8
Total	963	85	1048	100	8

formula, here named after its intrepid discoverer:

$$GLD = GPA + \frac{V + Q}{200}.$$

If the formula for GLD looks familiar, you are obviously one of the lucky readers of an unpublished monograph by Benno G. Fricke (Note 1), in which he proposes an admission index "for potential graduate students in all fields" (p. 91); this formula, which provides scores in grade point units, is

$$\frac{GPA}{2} + \frac{V + Q}{800}.$$

To simplify Fricke's formula (FRK) and thereby make it directly comparable to GLD, simply multiply it by two:

$$FRK = GPA + \frac{V + Q}{400}.$$

The intercorrelations among these four composites and among the four variables that go into each of them, for the 963 majority applicants, are presented in Table 2. The values in this table suggest that these applicants were already a highly selected sample. The correlations between undergraduate GPA and the two GRE scores, which are typically quite substantial in an unselected sample of college students (e.g., Fricke, Note 1), were near zero in the University of Oregon applicant sample. Why? Because only students with "good" grades and with "reasonable" GRE scores bother to apply for PhD-level training in psychology at the University of Oregon, and thus the range of GPA and GRE scores in this sample is highly attenuated. In addition, only individuals who have *either* "high" test scores *or* "high" GPAs are likely to apply, thus distorting all the more severely the relationship between these two types of academic predictors in the applicant sample.

TABLE 2: *Intercorrelations Among Four Admission Indices and Four Linear Composites*

Item	1	2	3	4	5	6	7
Admission index							
1. GPA							
2. QI	−.05						
3. GRE-V	.10	.30					
4. GRE-Q	.12	.25	.54				
Linear composite							
5. OLD	.50	.44	.78	.80			
6. SIM	.55	.24	.77	.80	.98		
7. GLD	.50	.25	.79	.82	.98	.999	
8. FRK	.72	.19	.67	.70	.94	.97	.96

Note. For majority applicants only (n = 963). Correlations >.06 and .08 differ significantly from zero at the .05 and .01 levels, respectively. Abbreviations: GPA = grade point average; QI = quality of undergraduate institution; GRE-V = verbal score on Graduate Record Examination; GRE-Q = quantitative score on Graduate Record Examination; OLD = Old Formula; SIM = simplified; GLD = Goldberg; FRK = Fricke.

TABLE 3: *Comparison of 1974 and 1975 Majority Applicants: Means and Standard Deviations for Eight Admission Indices*

Admission index	1974[a]		1975[b]			
	M	*SD*	*M*	*SD*	*r*	*F*
GPA	3.35	.40	3.44	.37	.12	13.2**
QI	2.72	1.68	2.73	1.67	.00	0
GRE-V	612	94	620	90	.04	1.3
GRE-Q	615	102	628	107	.06	3.3
OLD	9.36	1.00	9.55	.98	.09	8.09*
SIM	9.01	.92	9.20	.91	.10	9.29*
GLD	9.49	.99	9.68	.98	.09	8.54*
FRK	6.42	.62	6.56	.60	.11	12.26*

Note. Abbreviations: GPA = grade point average; QI = quality of undergraduate institution; GRE-V = verbal score on Graduate Record Examination; GRE-Q = quantitative score on Graduate Record Examination; OLD = Old Formula; SIM = simplified; GLD = Goldberg; FRK = Fricke.

[a] Majority applicants for fall 1974 (n = 650).

[b] Majority applicants for fall 1975 (n = 313).

* $p < .01$.

** $p < .001$.

The four linear composites rank order applicants in a *very* similar fashion. GLD and SIM are essentially identical (which should prove reassuring to those readers who distrust mathematics), and both correlate .98 with OLD.

Table 3 presents a comparison between the 1973–1974 and the 1974–1975 majority applicant samples on each of the eight admission indices. The mean scores on all admission indices other than QI were slightly higher in 1973–1974 than in 1974–1975, but the effects were statistically significant only for GPA and the four linear composites. Although other interpretations are possible, it seems reasonable that the effect of introducing a $10 processing fee—which cut the applicant pool in half—served to discourage more of the low-GPA than high-GPA students from applying to the University of Oregon.

Table 4 provides a comparison among the majority applicants to each of the department's four programs. By and large, students applying to each program were quite equivalent. The clinical program tended to draw students with slightly higher GPAs than the other three programs, while the experimental and physiological programs tended to draw students with slightly higher GRE quantitative scores.

Table 5 compares three types of majority applicants: (a) those who were invited to the University of Oregon and accepted the invitation, (b) those who were invited but declined to come, and (c) those who were not invited. While there is a tendency for those who declined to have slightly superior GPA, GRE, and linear composite scores than those who accepted,

TABLE 4: *Comparison of Majority Applicants to Each of Four Departmental Programs: Means and Standard Deviations for Eight Admission Indices*

Admission index	Clinical (n = 552)		Developmental–personality–social (n = 189)		Experimental (n = 154)		Physiological (n = 68)		
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*
GPA	3.42	.37	3.32	.39	3.34	.45	3.34	.35	3.73*
QI	2.74	1.73	2.57	1.52	2.77	1.73	2.87	1.47	.75
GRE-V	614	92	611	94	624	97	613	94	.61
GRE-Q	611	105	616	98	643	104	641	96	4.94**
OLD	9.42	1.00	9.31	.97	9.53	1.07	9.48	.87	1.51
SIM	9.06	.92	8.98	.91	9.17	.98	9.11	.80	1.34
GLD	9.54	.99	9.46	.97	9.67	1.05	9.60	.87	1.42
FRK	6.48	.61	6.39	.61	6.51	.68	6.47	.53	1.23

Note. Abbreviations: GPA = grade point average; QI = quality of undergraduate institution; GRE-V = verbal score on Graduate Record Examination; GRE-Q = quantitative score on Graduate Record Examination; OLD = Old Formula; SIM = simplified; GLD = Goldberg; FRK = Fricke.
* $p < .05$.
** $p < .01$.

the major differences, as would be expected, are between those who were invited and those who were not. Specifically, the average GRE score for the invited applicants was close to 700, while that for the rejected applicants was approximately 600.

Nonetheless, with a selection ratio of less than 1 in 10, clearly many majority applicants with highly impressive qualifications are not invited to the University of Oregon. We can see this most clearly in Table 6, which shows the probability of being invited as a function of an applicant's score on the GLD linear composite. The probability functions for OLD, SIM, and GLD are essentially linear, while that for FRK is exponential. For all four linear composites, the probability of being invited to the University of Oregon is only .50 for applicants with the very highest scores, and this probability drops precipitously as an applicant's linear composite score gets even a slight bit lower. For all practical purposes, the University of Oregon simply does not invite any majority applicants with linear composite scores on OLD, SIM, or GLD of 9.7 or below (or on FRK, of 6.3 or below).

TABLE 5: *Comparison of Those Majority Applicants Invited and Those Rejected: Means and Standard Deviations for Eight Admission Indices*

Admission index	Accepted (n = 33)		Declined (n = 54)		Rejected (n = 876)	
	M	*SD*	*M*	*SD*	*M*	*SD*
GPA	3.63	.35	3.64	.24	3.35	.39
QI	3.97	1.83	3.59	1.94	2.62	1.62
GRE-V	680	65	702	54	607	92
GRE-Q	699	61	715	59	610	103
OLD	10.50	.39	10.63	.49	9.31	.96
SIM	9.98	.39	10.17	.45	8.97	.89
GLD	10.52	.41	10.73	.48	9.44	.96
FRK	7.08	.30	7.19	.31	6.40	.60

Note. Abbreviations: GPA = grade point average; QI = quality of undergraduate institution; GRE-V = verbal score on Graduate Record Examination; GRE-Q = quantitative score on Graduate Record Examination; OLD = Old Formula; SIM = simplified; GLD = Goldberg; FRK = Fricke.

All of the preceding analyses, however, have been confined to majority applicants, and the picture changes dramatically if we consider the fate of minority (and foreign) applicants. Since the number of minority applicants has been so small, enough data to estimate minority probability functions have not yet accumulated. Table 7, however, provides a comparison of the mean scores of majority and minority applicants on each of the eight admission indices. The major differences between the two types of applicants were on their GRE scores and, therefore, on all of the linear composites; majority applicants averaged close to 100 points higher on their GRE scores than did minority applicants. Indeed, since Canadian applicants have been classified as "foreign" students,[8] the inclusion of the foreign subsample in the minority sample serves to slightly increase the minority mean scores and to dramatically increase the standard deviations of these scores. If the foreign subsample were not included, the differences in means would be greater and the standard deviations more comparable.

Some Conclusions and Recommendations

The four linear composites produce such similar rank orderings of applicants (Table 2) that for all practical

[8] While the very small foreign subsample should have been excluded from the minority sample, the coding of the archival data used for these analyses did not permit these applicants to be identified.

purposes they are interchangeable. However, since potential applicants should be provided with the actual formula used for screening purposes, rather than with a mere approximation, GLD should probably be substituted for OLD. Indeed, the addition of QI to the formula increases the probability of clerical error (and increases the amount of clerical time needed to process the applications), with virtually nothing gained in compensation.

Psychology departments should consider the effects on the application process of requiring a processing fee. Among these effects are a substantial decrease in the number of applications, especially from students with lower undergraduate GPAs. At the very least, if it is possible, the application packet should include a form to be filled out by applicants who cannot afford the fee (especially minority and foreign applicants), the return of which would waive the fee until after selection decisions are made.

Departments should continuously evaluate the application process as it affects minority and foreign applicants. At the moment, the University of Oregon invites a higher proportion of minority than majority applicants, in spite of the fact that the minority sample has a markedly lower average GRE score. Because minority applicants with high test scores are in great demand at most other American institutions of higher education as well as at the University of Oregon, such applicants tend to be invited to many schools and, consequently, to go elsewhere in greater proportions than do the majority applicants who are invited. The implications of these findings should be considered most carefully.

Departments should also consider the addition, at least on an experimental basis, of some measures of potential success in psychology other than those standard ones typically required. While Graduate Admissions Committees should take the lead in evaluating any such suggested innovations, the task is difficult enough, and important enough, to warrant continuous thought by psychologists more generally.

I should now like to propose one possible departure from standard procedures. Faculty members, particularly those in the large multiversities (e.g., University of California and University of Michigan), rarely get to know undergraduates all that well. As a consequence, they are typically in a poor position to furnish the sort of detailed information typically requested on reference forms. Moreover, undergraduates justifiably feel compelled to apply to many graduate schools (my guess is that the range is from 5 to 15, with a mean somewhere around 8–10) in order to increase the probability of their being invited to one of them. Thus, undergraduates are forced to make time-demanding and burdensome requests of their professors, who in turn feel compelled to carry out the chore of inventing (sometimes out of whole cloth) some persuasive message of praise about that dim face who once sat in the back of their lecture halls. I suspect that far more of the variance in these faculty evaluations stems from individual differences in creativity and imaginativeness among the professors than from such differences among the applicants themselves.

Yet, some students have made the effort to work closely with a professor or two, and the particularized information that these professors can contribute should not be deliberately excluded. Consequently, I suggest that applicants be given a choice of the *number* of faculty references they wish to submit (zero, one, two, three, or more), depending on the nature of their undergraduate institution and the extent of their involvement with their professors. In addition, however, they might be required to submit a copy of a single paper they have written during the past 4 years, the one that they think best reflects the caliber of their work, regardless of course content. I suspect that more may be learned about a student's potential from such a single work sample than from all those reference forms that are now required.

TABLE 6: *Probability of Admission as a Function of an Applicant's Score on the Goldberg Linear Composite (Majority Applicants Only)*

Linear composite score	Probability of admission
>11	.50
10.5 to 11	.35
10 to 10.5	.20
9.5 to 10	.05
<9.5	.00

TABLE 7: *Comparison of Majority and Minority Applicants: Means and Standard Deviations for Eight Admission Indices*

Admission index	Majority (n = 963)		Minority (and foreign) (n = 85)	
	M	*SD*	*M*	*SD*
GPA	3.38	.39	3.29	.49
QI	2.72	1.67	1.80	1.35
GRE-V	615	93	507	133
GRE-Q	619	103	543	140
OLD	9.42	1.00	8.38	1.34
SIM	9.07	.92	8.15	1.34
GLD	9.55	.99	8.54	1.44
FRK	6.46	.62	5.91	.89

Note. Abbreviations: GPA = grade point average; QI = quality of undergraduate institution; GRE-V = verbal score on Graduate Record Examination; GRE-Q = quantitative score on Graduate Record Examination; OLD = Old Formula; SIM = simplified; GLD = Goldberg; FRK = Fricke.

Finally, psychology departments should not only cooperate with, but should actually attempt to stimulate, the development of a centralized national application system. The cost of our present admissions process to applicants and to institutions is horrendous, and both applicants and institutions would stand to gain immeasurably from the introduction of a centralized application system. Moreover, much-needed research—which is inherently impossible at any single institution—could be carried out quite efficiently if a national application program were to be realized. A framework for such a system has been suggested by Leonard G. Rorer of Miami University in Oxford, Ohio. He has written a proposal for such a project and it has been endorsed by the Board of Directors of the American Psychological Association. Psychology departments should do all they can to see that the proposal is funded and that a centralized application process soon comes into being.

REFERENCE NOTE

1. Fricke, B. G. *Grading, testing, standards, and all that: A report to the faculty.* Ann Arbor: Evaluation and Examinations Office, University of Michigan, 1975.

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