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THE WISCONSIN PHARMACIST-PRECEPTOR AS A TEACHER

A Preliminary Study of Relative Role Effectiveness

BY

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"... The key to the success of any practical pharmacy training program lies with the preceptor. He must be made to feel the dignity of this program and to understand that his efforts are a part of the total educational process of the trainee as do the members of the faculty of a college of pharmacy."

- Letter from H. C. McAllister to R. Salisbury, September 10, 1960.

ACKNOWLEDGEMENTS

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The author thanks the Wisconsin State Board of Pharmacy for help from Miss Vera Appleton and Mr. Paul Pumpian and the University of Wisconsin School of Pharmacy for help from Miss Lois Lane for supplying names and addresses for the universe of this study.

The author wishes he could give adequate recognition to the anonymous pharmacy preceptors and past interns in Wisconsin whose patient, instructive participation made this study possible.

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INTRODUCTORY REMARKS

A period of practical* training in the pharmacy always has been a significant part of pharmaceutical education -- and always open to discussion. With a massive shift of emphasis to academic education during the present century, in American licensure requirements, the old apprenticeship atrophied, in most states dwindling to a year of relatively uncontrolled experience. So uncontrolled was it, that general conclusions of The Pharmaceutical Survey 1946-49 were "that, on the whole, the practical experience requirement is loosely administered, supervised in a superficial manner, and is productive of a minimum benefit to the prospective licensee for the practice of pharmacy. The fundamental responsibilities of the pharmacist to the apprentice have yet to be realized and fulfilled."[1]

Lacking substantial support for the proposed alternative of abolishing the requirement of supervised experience, the profession has responded to the implied challenge meanwhile, by a recurring concern at both the national and state levels with standards of practical training. This concern was especially visible through efforts of the individual state boards of pharmacy after World War II to give

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* For our purpose, throughout this report, we mean by "practical training": an imparting or application of knowledge in which the work experience and setting is an integral part. The term practical in other contexts of this study has a similar sense to that here expressed.

1. Edward C. Elliott, General Report of the Pharmaceutical Survey 1946-49, American Council on Education, Washington, D.C. (1950), 224 f.

reality, in the teaching pharmacies, to "Minimum Standards" of the National Association of Boards of Pharmacy (which had been developed as early as 1940). More recently, this concern has matured in the form of a "controlled internship."[2]

Adoption of the term "internship" during the past quarter century may have been partly motivated by a feeling that "apprenticeship" inadequately expressed the culminating educational experience after a university curriculum lasting for four and (uniformly after 1960) for at least five years; but the term "internship" also reflected a new concept, at least in states that took the conclusion of The Pharmaceutical Survey seriously. "Intern" (from the French, meaning "resident within") implies in pharmacy, as in medicine, a period of residence under the tutelage of highly qualified practitioners, to learn to apply with discrimination and assurance in practice what has been learned academically of the profession and its underlying science. When most successful, a competent intern has as counterpart a competent preceptor; and it is to gain some insight into how one might characterize and differentiate superior preceptorship that this study was initiated.

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2. Although the term "internship" often is used in American pharmacy to mean the entire legally required period of in-service training, in Wisconsin it legally designates only that portion of the training served after graduation and comprises the last six months of the one-year requirement; and it is in this restricted sense that the term is used throughout the present report.

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CHAPTER I: THE BACKGROUND

TRADITIONAL IMPORTANCE OF THE PRECEPTOR IN PHARMACY

The Preceptor As Sole Educator

The distinction between an apprentice and an intern is not a small one. Traditionally, an "apprentice" mainly learns his job "on the job," a practical emulation of a skilled master that overshadows any academic or theoretic instruction in the calling. Conversely, an intern finds himself in transition between formal education and independent practice, learning "on the job" what cannot be better learned in academia. The implication is that the main body of knowledge can be learned in school, but however far that may be pushed, there is other knowledge that can be learned or understood properly only when on the job. The internship appears to become a more efficient procedure than the apprenticeship particularly in a calling, "more heavily rooted in knowledge than in motor skills."[1] This has become true of pharmacy, during the past century especially. Thus the purpose and meaning of the practical experience requirement has undergone a profound change from what it was originally.

"Apprenticeship" began as the sole form of pharmaceutical education. In Europe the transition to main reliance on

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1. Howard Wakefield, "The Preceptor-Intern Relationship," American Journal of Pharmaceutical Education, 25, No. 2 (Spring 1961), 227-228.

academic education took place stepwise between the 16th and 19th century, dependent upon circumstances in the individual countries. The term and its original meaning, operationally, came to America as the sole means of pharmaceutical education.[2]

Up to the 17th century, pharmaceutical education in German states had been imparted by preceptors (often physicians) who apprenticed young students (often for six years). By the latter part of the 18th century, pharmacists themselves became dissatisfied with the educational system and began to form private institutes of pharmaceutical studies, typically in a laboratory associated with an outstanding pharmacy. Thus the school of J. B. Trommsdorf in his pharmacy at Erfurt marked the beginning of a higher education by pharmacists and for pharmacists in Germany as early as the 1750's.[3]

It was common in Europe for a preceptor to bind his apprentice by contract. In France, for example, this varied from four years (Lyon, 1588) to ten years (Amiens, 1576; Beauveau, 1628; Paris, 1638).[4] The master who took an

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2. Glenn A. Sonnedecker, American Pharmaceutical Education Before 1900, unpublished Ph.D. thesis, University of Wisconsin (1952), 19.

3. For a description of early apprenticeship requirements in Germany, see H. L. Taylor, "The Practice of Pharmacology in Europe," The Midland Druggist and Pharmaceutical Review (October 1910), 35-36 and Edward Kremers and George Urdang, History of Pharmacy, 3rd ed., J. B. Lippincott Co., Philadelphia (1963), 82-84.

4. Maurice Bouvet, Histoire de la Pharmacie en France des Origines a Nos Jours, Editions Occitania, Paris (1937), 71-79.

apprentice was paid a substantial fee in return for providing the food, shelter and education of the future pharmacist.[5]

Gradually some academic application became a requisite for practice. The university at Montpellier brought the more theoretic part of training out of the pharmacy into the university in 1550.[6] Thus this marked the shift of the educational center for the French apprentice, a shift that became more widespread with the establishment of the College de Pharmacie in 1777.[7]

In Italy, where guilds flourished from the 12th century, the master was the sole educator of the apprentice for centuries. "A student of pharmacy [1565] had to serve five years as an apprentice and another three years as clerk; finally he was required to pass a rather rigid examination, after which he became a pharmacist fully qualified to operate a pharmacy of his own."[8] By 1778 academic studies were required of pharmacists in Northern Italy, then extended by 1805 to the whole of Italy.[9]

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5. Kremers and Urdang's History, 2nd ed., p.82.
6. Bouvet, Histoire, p.95.
7. Kremers and Urdang's History, 3rd ed., p.72.
8. Ibid., p.58.
9. Ibid.

Educational requirements still vary widely in continental Europe. The period of practical experience (including any probationary period) reportedly varied in the 1950's from as little as one month in Poland all the way to two and one-half to four years in Finland.[10] Other examples abound to suggest that even today, there is little agreement internationally as to what constitutes the optimum practical experience, although governmental decision usually has been influenced by such factors as the relationship to the particular academic education as to kind, length and sequence.

The pharmaceutical apprenticeship was introduced into America from Europe at a time when the old system there was already moribund. Here, lacking the old guild controls and standards, what the preceptor achieved depended more heavily upon his own conscience and ability. In this context, the meaning of such a "practical education" proved to be not highly unpredictable. "...The quality of the education received by the apprentices depended upon the knowledge possessed by the preceptor and the opportunity for practice afforded in any particular locality."[11]

These early American preceptors constituted and determined the character of pharmaceutical education before there were either pharmacy laws or schools.

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10. Hans Dieckmann, "Geschichte und Probleme der Apothekerausbildung," International Society for the History of Pharmacy, 5 (1954), 188.

11. Robert Fischelis, "Education in Pharmacy," American Druggist (October 1933), 72-73, 148-162.

The Preceptor Becomes Independent Adjunct to Formal Education

After the opening of the early schools of pharmacy (six by 1865), the preceptors continued to dominate pharmaceutical education -- indeed, with one exception, these practitioners were responsible for founding and operating the schools until the Civil War (and some schools long afterward). "... The idea was not so much to give a thorough training in the fundamental sciences as to supplement the unsystematic training of the stores by a course of evening lectures.... The course or courses of lectures simply served as a kind of superstructure, their prime object being to bring into some system the information and experience irregularly acquired during an apprenticeship and assistanceship of four or more years."[12] Without a proper legal standard, however, many apprentices took advantage of an opportunity to cut short the term expected by their preceptors, to enter practice as a self-defined pharmacist.

The dominance of the preceptorship, which was only "rounded off" by voluntary formal education (often night schools of one to two years), was not effectively challenged until state universities established courses in pharmacy. The first of these, the University of Michigan, offered a course

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12. Edward Kremers, "The State Universities and Pharmaceutical Education," Proceedings, American Conference of Pharmaceutical Faculties, 4th Annual Meeting (1903), 4-5.

"infused with laboratory work, and it ignored the traditional apprenticeship,"[13] which was one of the requirements for a diploma from old-line schools. With the rise of the state colleges and growing dissatisfaction with the apprentice's education, the preceptor gradually lost his hold on the apprentice and released him, often happily, to the care of the school.[14] The state boards, mostly founded during the last quarter of the century, constituted a new agency for assuring some standard of competence through setting a minimum length of apprenticeship and licensing examination.

Periodic discontent continued into the 20th century, when one state after another made at least some academic education compulsory (New York first in 1905). This stimulated improvement in the courses given in schools; and as the formal education period lengthened (four years compulsory in 1932), the preceptorship period correspondingly dwindled. With this change, the period of practical training gradually became standardized at about one year.[15]

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13. Glenn Sonnedecker and George Urdang, "Pharmaceutical Education," Higher Education, 19 (February 15, 1953), 135.

14. For comments on the growing dissatisfaction, see Albert B. Prescott, "Pharmaceutical Education," Proceedings, American Pharmaceutical Association, 19 (1871), 425-429, and J. M. Francis, "Higher Education for the Pharmacists," Bulletin of Pharmacy, 8, No. 13 (January 1894), 12-14.

15. For current practical experience requirements in various states, see "Requirements for Examination and Registration," Proceedings, National Association of Boards of Pharmacy (1963), 71-72.

Variations still exist, and as Zapotocky pointed out, "it is most unlikely that the length of internship or the period during which internship should be offered will be settled in the next decade."[16]

The Pharmaceutical Survey 1946-49

One of the most forceful influences which led to the "controlled internship," as we now know it, was the national survey of pharmacy conducted by the American Council on Education. Its General Report expressed serious doubts as to the value of the then existing practical experience requirements and recommended "that the present requirements for practical experience as to a prerequisite for licensure be modified to be of more practical value or else abolished."[17]

The recommendation did not go unheeded. Earlier, New Jersey had done pioneer work in regulating the required practical experience,[18] followed by some effort in other states, e.g., Oregon[19] while after the Pharmaceutical Survey

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16. Joseph A. Zapotocky, "The Contents of an Internship Manual for Pharmacy Preceptors," Proceedings, A.A.C.P. and N.A.B.P. 18th Annual Meeting, District No. 8 (October 11-13, 1959), 37-41.

17. Elliott, General Report, p. 225.

18. Robert P. Fischelis, "Regulations Regarding Practical Experience in New Jersey," The New Jersey Journal of Pharmacy, 9, No. 8 (August 1936), 9-12.

19. Communication from A. G. McLain, Secretary-Treasurer, Oregon Board of Pharmacy, March 26, 1965.

Wisconsin in 1959[20] made noteworthy advances in their own way. Wisconsin felt the need for a controlled internship program and had begun work on it in 1956 and 1957, as indicated by Louis W. Busse.[21] By the 1960's, the controlled internship programs had developed in a few pioneering states, had attracted the interest of other states and even other countries.[22]

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20. Communication from Paul Pumpian, Secretary, Wisconsin State Board of Pharmacy, April 12, 1965.

21. See Louis W. Busse, "A Philosophy of Internship Programming," Journal of the American Pharmaceutical Association, Practical Pharmacy Edition, 17, No. 7 (July 1956), 459-461, and "Pharmacy Internship Training," Journal of the American Pharmaceutical Association, Practical Pharmacy Edition, 18, No. 10 (October 1957), 612-613.

22. In Ontario, Canada, in 1965, a controlled internship program modelled after the one currently in effect in Wisconsin, will be put into effect. Interest expressed in the present study by the Ontario College of Pharmacy is one evidence that the effort and cooperation invested by participants in this study have been to good purpose.

    For views on the practical experience requirement, see J. Leon Lichtin, "Pharmaceutical Apprenticeship: The State Board's Views and Regulations," American Journal of Pharmaceutical Education, 20, No. 2 (Spring 1956), 200-205; Rob S. McCutcheon, "Dynamic Curriculum," Journal of the American Pharmaceutical Association, Practical Pharmacy Edition, 20 (1959), 322-323; "Panel Discussion: The Duration and Integration of an Optimal Pharmacy Program," Proceedings, A.A.C.P. and N.A.B.P. 20th Annual Meeting, District No. 8 (October 29-31, 1961), 61-76; Lloyd M. Parks, "Address of the President," American Journal of Pharmaceutical Education, 26 (Summer 1962), 279-285.

The Secretary of the Wisconsin Board of Pharmacy, Paul A. Pumpian, who became responsible for the administration of the controlled internship program later adopted (1959), sought to assure "that only pharmacists of the highest caliber are given an apportunity to train our future pharmacists."[23]

The Preceptor as a Certified Adjunct-Teacher With Legally Controlled Standards

The dimensions and standards of the preceptorship in Wisconsin have been increased more than in other states. Under the new program it is significant for improvement and uniformity of the preceptorship as a teaching function that the preceptor is not merely certified, but must meet specific certification requirements. At present, these are:

1. Completion of 36 months practice as a registered pharmacist engaged in the compounding and dispensing of pharmaceutical preparations and physicians' prescriptions and the supplying of drugs and drug containing preparations in a registered pharmacy in the state of Wisconsin.

2. Current full time practice as a registered pharmacist in a licensed pharmacy in the state of Wisconsin in which no less than 6000 prescriptions are filled annually and which is operated in a professional manner and in the library

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23. Paul A. Pumpian, "The Need for an Effective Internship Program," Bulletin, School of Pharmacy, The University of Wisconsin, University Extension Division (September 1960), 6.

of which there is, in addition to other required texts and materials, a copy of a recent edition of the United States Dispensatory.

3. Membership in the Wisconsin Pharmaceutical Association or the Wisconsin Society of Hospital Pharmacists.

4. Attendance at an annual meeting of a professional pharmaceutical organization within the three years immediately preceding the date of application for certification as a preceptor.

5. Attendance at a preceptor training conference within the three years immediately preceding the date of application for certification as a preceptor.

6. Attendance at a seminar on pharmacy of at least one day's duration during the three years prior to the date of application for certification as a preceptor.

7. Compliance with all the provisions of this rule.[24]

Pharmacists who are granted a preceptor's certificate are "charged with the responsibility of supervising the activities of a trainee in pharmacy so as to provide the trainee with experience which will make him proficient in the compounding and dispensing of pharmaceutical preparations and physicians' prescriptions, in the selling of drugs, drug containing preparations and related items and which will provide the trainee with a reasonable familiarity with the operation of a pharmacy."[25]

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24. Wisconsin Administrative Code, Rules of Wisconsin State Board of Pharmacy, 2.06 (March 1964), 15.

25. Ibid.

Thus the certified preceptor alone holds responsibility for giving practical training to pharmacy trainees in Wisconsin, rooted in a belief that the intern's tutelage under conditions of practice thus can be enhanced.

PURPOSES AND METHODOLOGY

Some Prior Findings

There has been little investigative study of the controlled internship program previously. The most extensive project was that undertaken by William T. Sharp, then of the University of Wisconsin, to evaluate the revised Pharmacy Training Program, which was adopted by the state of Wisconsin in July 1959. His report is based mainly on the replies to mailed questionnaires (1963) from 164 trainees and 152 preceptors. From 16 questions (five asking for suggestions to improve the training) asked of the trainees and 17 questions (seven asking for suggestions) asked of the preceptors, Sharp proposed a number of suggestions -- e.g., to improve the intern's notebook and increase the effectiveness of preceptor-intern relations and summarized the views of both preceptors and interns on aspects of the program as it then existed, such as the intern's interviews with medical personnel and the preceptor's training conferences.[26]

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26. William T. Sharp, An Analysis of the Pharmacy Trainee Program in Wisconsin, unpublished Master's thesis, University of Wisconsin (1964). Mr. Sharp is now Executive Secretary, Washington State Board of Pharmacy, Olympia, Washington.

Questionnaire surveys of more limited scope have been used to assess attitudes and impressions concerning the type of program among Kentucky pharmacists (1962)[27] and among North Carolina students of pharmacy (1964).[28]

Reasons for Research

The present investigation not only extends the work of Sharp in Wisconsin, but breaks new ground in its approach to assaying the ingredients of interaction between interns and a preceptor that they consider superior. The investigation was undertaken for several reasons: because of the fragmentary concrete knowledge from the field concerning the controlled pharmaceutical internship, which is now remediable as accumulated experience permits meaningful assessment; because of keen interest among state board members, pharmacy faculties, preceptors and interns in maximizing the value of the internship program; and because going beyond the conceptual scope of earlier work in this area known to us (whether in pharmacy or related professions) fosters new avenues of future study.[29]

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27. Harry A. Smith and Irvin J. Steinberg, "Views on Internship," Kentucky Pharmacist, 25, No. 2 (February 1962), 16-17.

28. M. A. Chambers, "Is Practical Experience an Education?," Carolina Journal of Pharmacy, 45, No. 2 (1964), 7-9.

29. Communication from the American Bar Association, the American Medical Association, and the American Optometric Association shows that only for Law and Medicine is there some form of practical training required; for Law, this requirement exists in only five states. No study of the effectiveness of this training, as far as is known, was ever undertaken.

Purposes and Scope

The present study focusses sharply on the preceptor in relation to his function as a practical teacher, and characterizes the circumstances of superior preceptorship, as far as the given methods and time for the study permitted. We have uncovered and tried to interrelate certain information about the temperament of these preceptors, the environment in which they teach their trainees, some features that differentiate preceptors, and the views of preceptors and interns on the controlled internship program.

The scope is limited to a selected small percentage of the total number of Wisconsin preceptors (17%)[30] which limits the meaning of the study but also permits a type of study (as will become clearer later) that otherwise could not have been conducted at present. The preceptor considered superior by his interns holds the center of the stage; and whatever we see and hear of others, they are in a subsidiary role intended to place in better perspective the character of the central figure. It is, then, in the nature of what we have set about to do that some of the more interesting aspects are suggestive rather than definitive for that protagonist of the scene before us, the "superior preceptor."

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30. Paul A. Pumpian, "Report of the Wisconsin State Board of Pharmacy," The Wisconsin Pharmacist, 32, No. 2 (February 1964), 40.

Collecting and Processing Information

Collecting. Interns rated their preceptors on a questionnaire (see Appendix A, p. 143) which has been pretested on 18 senior students at the School of Pharmacy, University of Wisconsin. Ratings were requested for all preceptors known by us to have had two or more interns under the controlled internship program in Wisconsin from 1959 through 1963 inclusive. Of 287 pharmacists identified as having served all or part of their internship under such preceptors, 180 received the questionnaire.[31] Various factors eliminated the other 107 as shown in table 1, p. 16. Of 158 replies from the former interns, 100 were usable for the final sample.[32] Of the 79 preceptors who taught these interns, 41 were utilized in the sample. (The other 38 were not utilized because corresponding interns were eliminated for reasons shown in table 1, p. 16 and explained in Appendix B, p. 165). Hence

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31. The State Board of Pharmacy of Wisconsin, Milwaukee, was generous in meeting our request for lists of names and addresses; and without the help of the Board (in particular Miss Vera Appleton, Administrative Assistant, as well as Secretary Paul Pumpian and President Peter Hauper) this study would not have been possible. In a few instances of recent moves, addresses were also kindly supplied by the Wisconsin Pharmaceutical Association and the University of Wisconsin School of Pharmacy. (Perhaps it deserves mention that prior Board records and individual records from the present investigation are not identifiable by the Board or others).

32. For second covering letter, see Appendix A, p. 145.

MAP I: GEOGRAPHIC DISTRIBUTION OF ALL PRECEPTORS WHO WERE RATED BY THEIR INTERNS

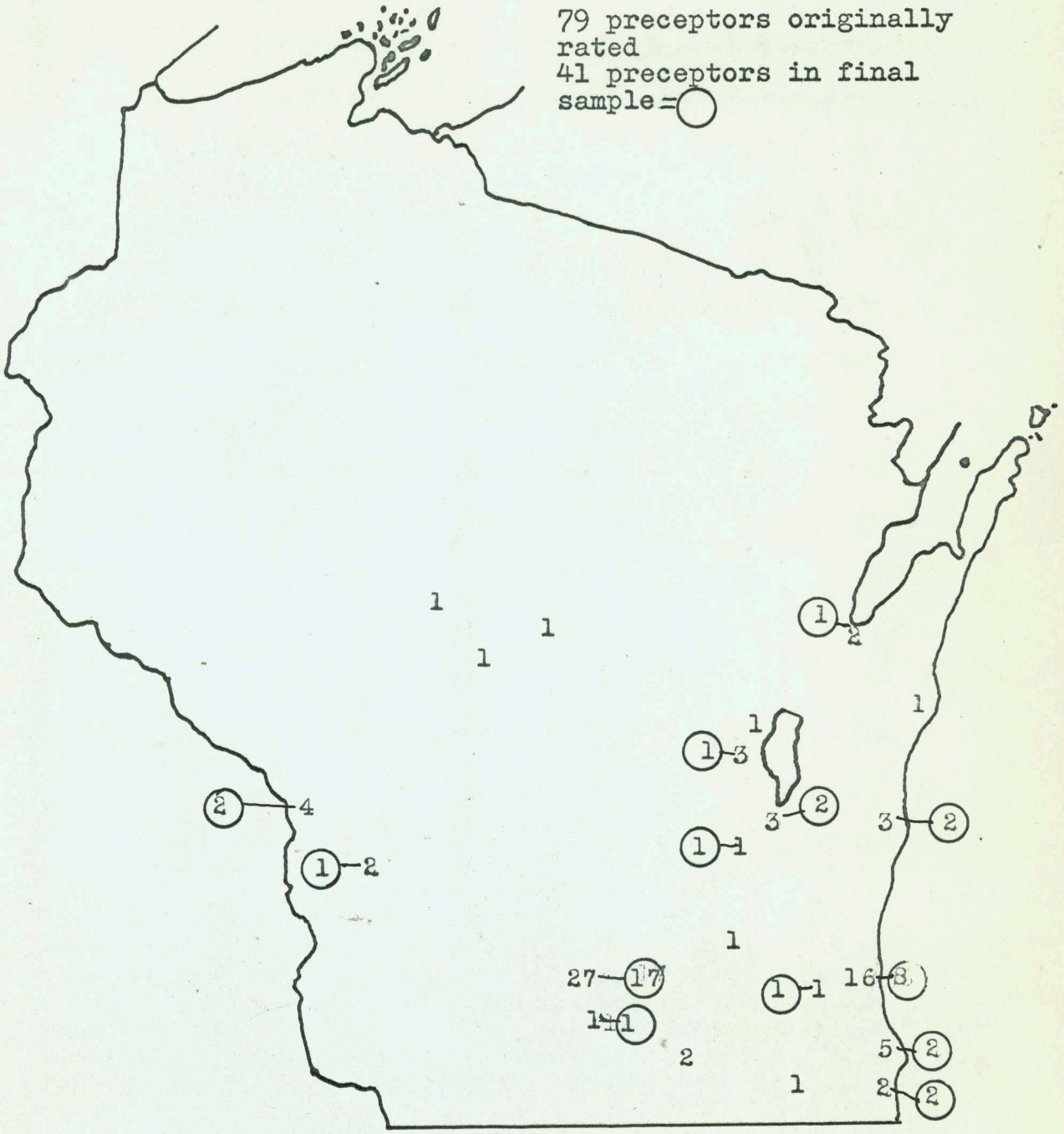

TABLE I: RESULTS OF SAMPLING TECHNIQUE: FORMER INTERNS

287	Interns initially eligible.
58	Eliminated because had more than one preceptor.[a]
38	Eliminated because paired intern did not reply.[b]
11	No address available.
180 (100%)	Questionnaires mailed.
102 (57%)	Returned from first mailing.
59 (33%)	Returned from second mailing.
161 (89%)	Total questionnaires returned.
3	Inadequately answered questionnaires.
158 (88%)	Total usable questionnaires.
54	Questionnaires eliminated by methodological requirements, explained Appendix B, p. 165.
104	Questionnaires available for use in final sample.
4	Questionnaires eliminated by preceptor not cooperating.[c]
100 (56%)	Questionnaires used in final sample.

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a. Only those interns who could be linked with the preceptor under whom they served last were kept in the sample. This almost always would be the longest and most mature part of the internship. To preserve the spontaneity of responses, no preceptor and former intern were linked by asking either one directly to identify the other.

b. Cases where two interns were linked with one preceptor, and one intern did not reply. Then, the other was automatically eliminated as well, because at least two ratings for each preceptor were required by our methodologic plan.

c. One preceptor refused, one was deceased.

41 preceptors rated by 100 interns constituted the final sample. The geographic distribution of these preceptors is shown in map 1, p. 15.

To obtain the interns' comments on their preceptors and the internship program, a covering letter and questionnaire were sent to the 100 interns (see Appendix A, p. 146 and p. 161 pretested on 18 senior students at the School of Pharmacy; major alterations, then mailed January 12, 1965). After 43 (43%) were returned (February 9, 1965), a second mailing was sent to non-respondent interns (see Appendix A, p. 147). Nine more replies were received, totalling 52 questionnaires or 52% of the sample. Unfortunately, 48% of the interns did not return a questionnaire, thus the intern's views in relation to the preceptor's views could not be compared in these instances.

To obtain the preceptor's comments, an interview guide was used to interview the 41 preceptors in the sample (pretested on six local pharmacists; for the interview guide, see Appendix A, p. 155). The preceptors also were asked during the interview to rate themselves as a preceptor on a form similar to the form on which they had been rated by their interns (see Appendix A, p. 160).

The pharmacies in which the preceptors taught their interns were examined, and information was recorded on four forms (pretested on six pharmacies; for the forms, see Appendix A, p. 149). To provide a relatively objective manner of designating the appearance of the teaching pharmacies, three interior photographs and three exterior photographs of pharmacies

were selected. These were arranged along a scale as shown in Diagram 1, p. 81 ; and each pharmacy visited was assigned a number best indicating its appearance in relation to the photographs. (For photographs, see Appendix D, p. 170). When two independent observers pretested the consistency of ratings that could be attained with the scaled photographs, it was found in rating six pharmacies that agreement was within two units (on the seven-unit scale), except for one pharmacy.

The temperamental qualities of the preceptor were evaluated by the Guilford-Zimmerman Temperament Survey, under the supervision of a psychologist.[33] (For the Survey blank, see Appendix E, p. 183). Answer sheets (see Appendix E, p. 185) were personally collected from 38 cooperating preceptors, hand-scored, and the results transferred to a "profile chart" to reveal the degree and pattern of ten temperamental qualities in relation to those of college men in general (see Appendix E, p. 184).

Information on the level of earlier academic achievement of the preceptors was obtained from their respective universities for 35 of the 41 preceptors in the sample.

The eight hypotheses that helped to frame the interview guides and mail questionnaires are mentioned individually

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33. Sincere appreciation for help in the use of the Temperament Survey is extended to Dr. William F. Thomas, Associate Director of the Student Counseling Center, University of Wisconsin.

in connection with the relevant findings (see also Appendix C, p. 169).

Processing. Materials received from interns, preceptors, as a result of questionnaires and personal interviews, were compared and contrasted. For many facets of interpretation, information obtained on superior-rated preceptors was compared with information on the other preceptors in the sample.

The answer sheets from the Guilford-Zimmerman Temperament Survey were hand-scored, and analysis of the "profile charts" was done with the assistance of a competent psychologist.[34]

Limitations Encountered

Probably the most serious problem of the project seemed inherent in the interviewing of the preceptors, in their pharmacies, during regular working hours. The pressure for their services elsewhere, interruptions, and a hurried atmosphere lowered the quality of many interviews. It was felt that many preceptors could have given better interviews if they would have found it convenient to be interviewed away from the pharmacy.

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34. Professor Jack C. Gilchrist of the Department of Psychology kindly offered suggestions that greatly helped in the analysis of the Survey results, in addition to the previously mentioned guidance received from Dr. William F. Thomas.

Another problem after interviewing in many pharmacies, was a risk of bias while listening to lengthy comments that did not seem productive or unusual. Therefore an effort was made to guard against sporadic impatience felt in conducting these later interviews. In evaluating the appearance of pharmacies, there may be some personal bias (usual in such ratings, although it cannot be quantified), but the general character of differences and similarities noted in the evaluations seem beyond question.

CHAPTER II: RATED EFFECTIVENESS OF PRECEPTORIAL TEACHING

THE INTERN'S VIEW IN RELATION TO THE PRECEPTOR'S VIEW

The Variability of Ratings

Many factors might influence an intern to rate his preceptor differently than does another. Interns often serve under the same preceptor at different times; and with more experience, the preceptor may have improved his ability to deal favorably with an intern. An intern who is the first to serve under a preceptor may rank him low, and the preceptor's last intern may rank him high; both perhaps are realistic evaluations of the same preceptor. Moreover, the difference in character and personality among interns is an important variable that accounts for part of the differences among interns' ratings of a given preceptor. A student who is an excellent scholar may have a different standard or tendency of rating. Extrinsic factors such as the pharmacy's atmosphere or the intern's relationship with co-workers might also color occasionally an intern's rating of his preceptor. Similar influences might affect a preceptor's self-evaluation. Besides these variables that can affect the individual's judgment on occasion, the risk of their distorting effect in the present study would have been reduced if a seasoned methodology were available and more particularly if a larger number of former interns per preceptor were available.

The meaning attributed by the interns to the characteristics rated may have varied. Though the characteristics were expressed predominantly in qualitative rather than quantitative terms, it is likely that ideas of "amount" colored the replies of some interns. Interviews with the interns would help stabilize criteria or points of reference by which to judge preceptorial ability. Particularly among the 18 preceptors who were rejected because their interns' over-all ratings varied too widely, follow-up interviews could determine the reasons for such disparate ratings.

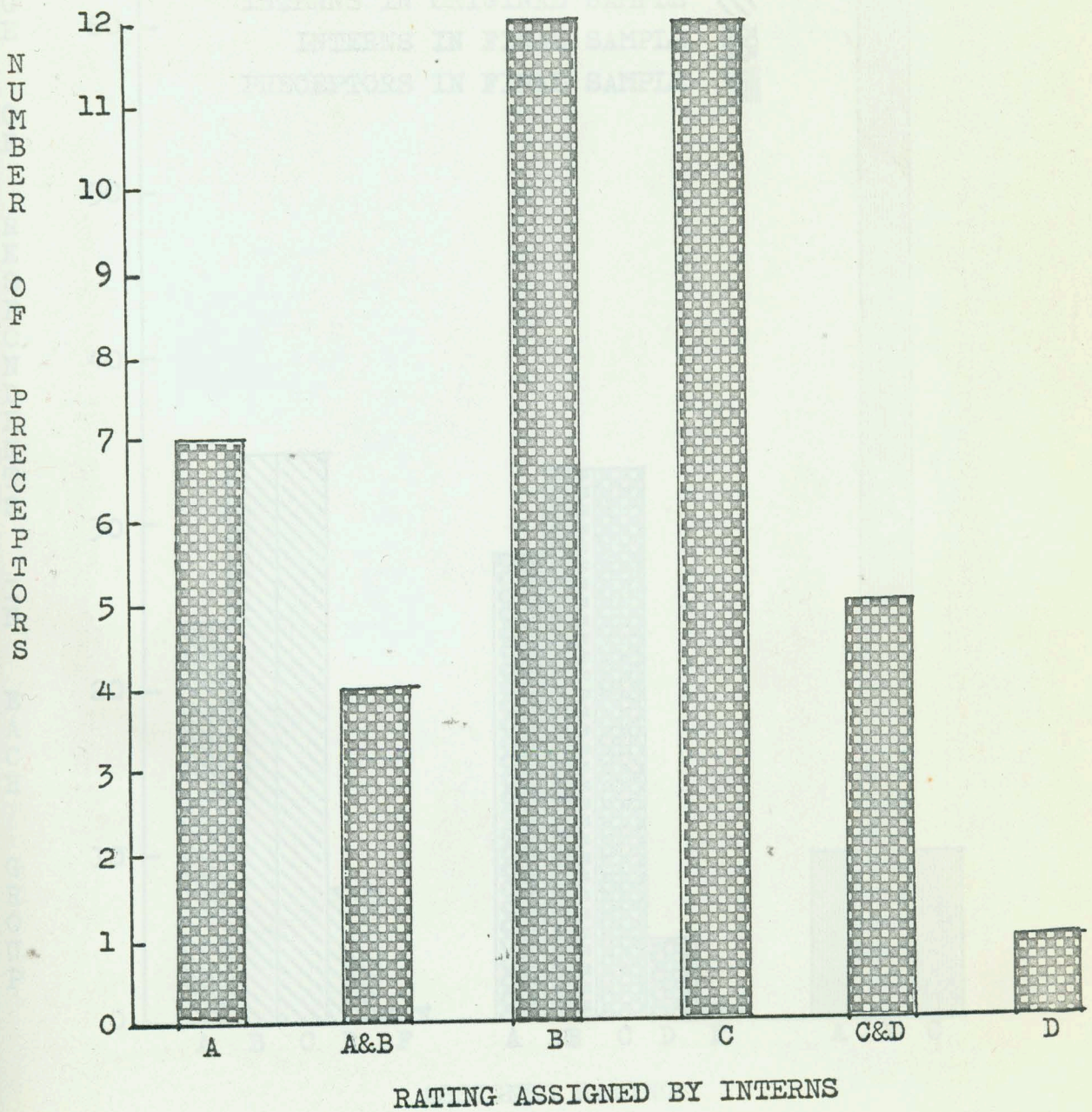
Comparison of Over-all (Median) Ratings

The 41 preceptors participating were evaluated by 100 of their former interns. Here is no randomly selected group of interns, however (explained in Appendix B, p. 165), so we are not surprised that the statistical distribution of the ratings (100) they gave to preceptors does not correspond with the ratings of the larger group (158) at the extremes (i.e., "A" and "F," see graph 2, p. 25); but in the mid-range (B - C - D) the distribution pattern of the ratings is about the same for the smaller group as it is for the whole group. Anyhow, this question of distribution is put aside to assure a sample of interns with the following characteristics: Every intern has at least one mate who, in the most advanced stage of internship served under the same preceptor and who agrees, at least roughly, on the level of effectiveness of the preceptor they had in common.

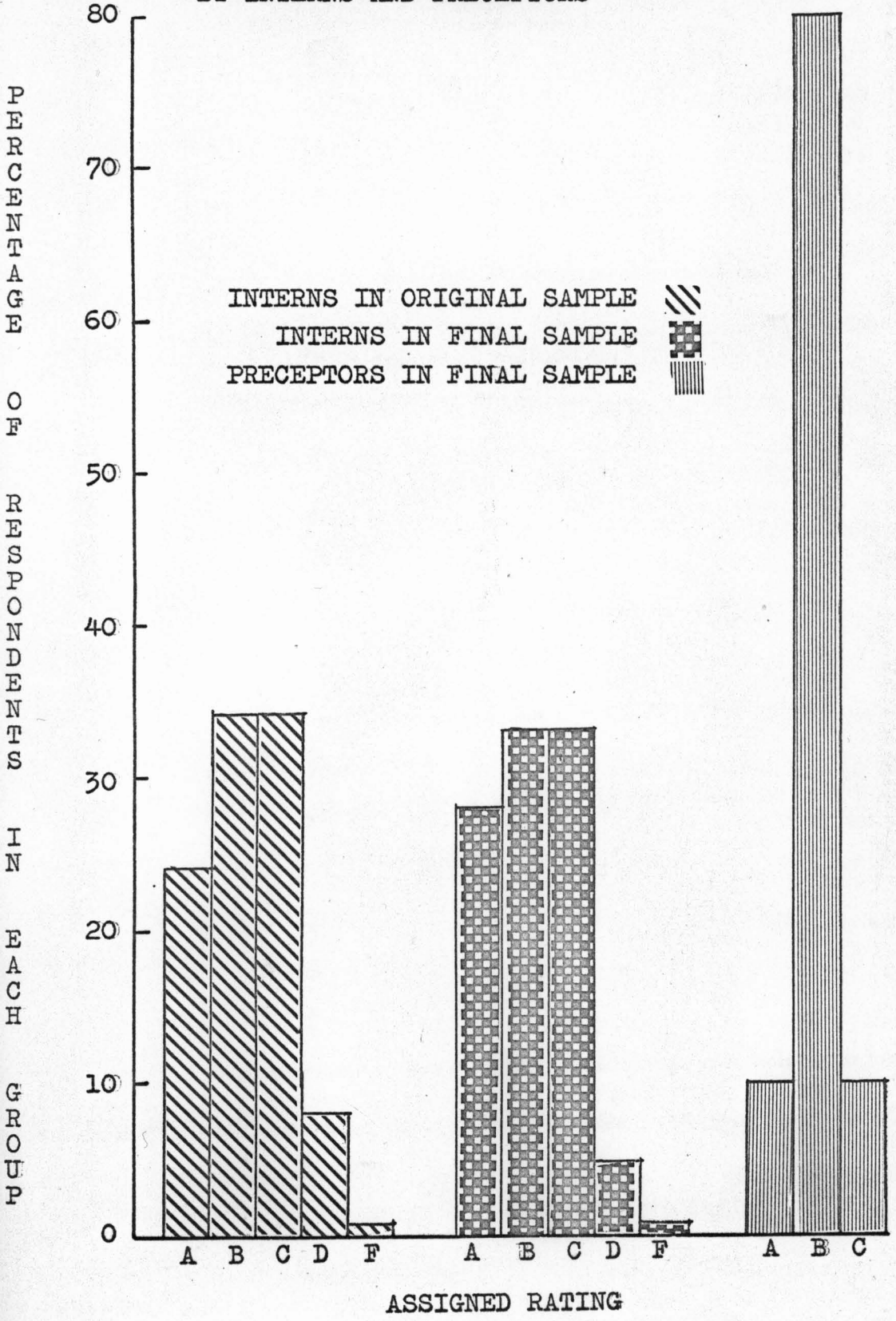
TABLE 2: PRECEPTOR'S MEDIAN SELF-RATING COMPARED TO MEDIAN RATING ASSIGNED BY HIS INTERNS (SIX-FACTOR SCALE, APPENDIX A, p. 143)

Preceptor's Serial Number	Median Rating of Preceptor by His Interns	Preceptor's Median Self-rating
28	A	B
34	A	B
43	A	B
44	A	B
60	A	B
85	A	B
88	A	B
23	A-B	B
32	A-B	A
38	A-B	B
61	A-B	B
3	B	B
11	B	B
12	B	B
13	B	A
14	B	B
20	B	B
24	B	B
59	B	B
68	B	A
79	B	B
33	B	A
64	B	B
1	C	B
18	C	B
26	C	B
36	C	B
37	C	C
47	C	B
50	C	B
52	C	B
53	C	B
54	C	B
66	C	B
73	C	B
55	C-D	C
69	C-D	B
71	C-D	C
72	C-D	C
83	C-D	B
10	D	B

GRAPH 1: DISTRIBUTION OF MEDIAN RATINGS ASSIGNED BY INTERNS TO THE 41 PRECEPTORS IN FINAL SAMPLE



GRAPH 2: PERCENTAGE DISTRIBUTION OF RATINGS ASSIGNED BY INTERNS AND PRECEPTORS



How interns rate preceptors and how preceptors rate themselves makes an interesting comparison (see table 2, p. 23). Of the 23 preceptors ranked "A" or "B" by their interns, only four rank themselves as "A"; all others rank themselves as "B." No preceptor ranked by his interns as "A" gives himself such a high over-all rating. Of the 18 preceptors in Group C-D, only four rank themselves as "C"; all others rank themselves as "B."

This finding tends to confirm the hypothesis that a majority of preceptors who are rated as superior by interns will independently recognize a presumed superiority by self-rating on the same scale. The findings suggest further that preceptors rated as less-than-superior by their interns tend to consider themselves to be better preceptors than their interns do. Another interpretation would be to say that the whole group of preceptors tends to prefer a gentlemanly "B" or "good" self-image, admitting to neither the marked excellences nor marked deficiencies recalled by their former interns (with few exceptions). However, more detailed examination of differences between ratings, particularly on individual characteristics discussed below, suggests that the preceptors who are rated as superior by their interns do stand out clearly from the other preceptors. Preceptors rated as less-than-superior are not so easily or sharply delineated as such. Further discussion of this point, and the questions it raises, is presented below.

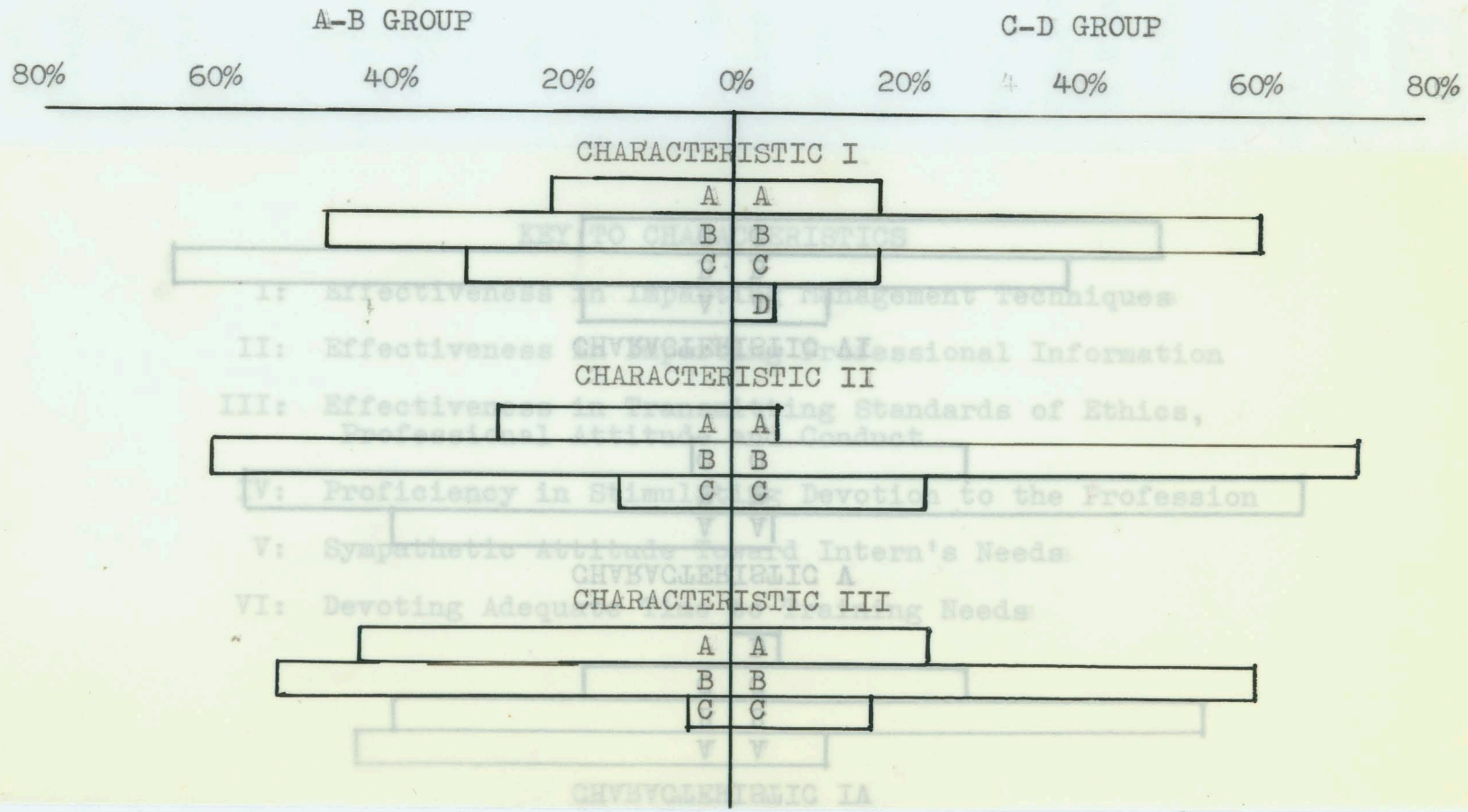
INDIVIDUAL RATED CHARACTERISTICS

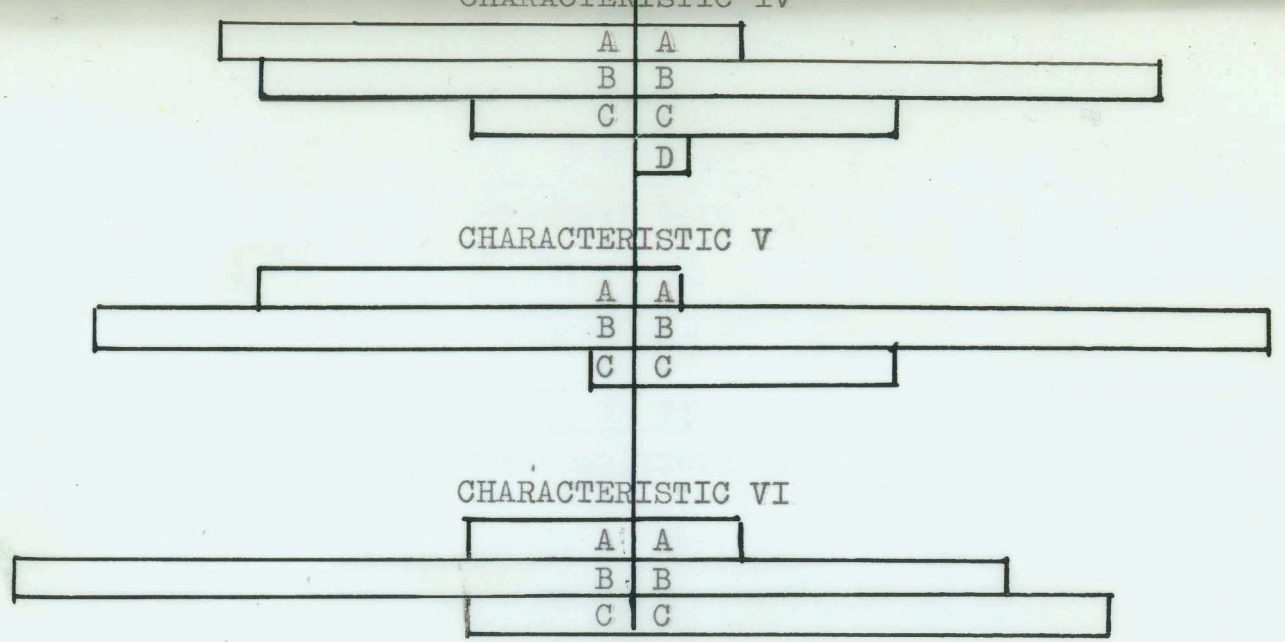
The interns' image and the self-image of the preceptors' effectiveness were recorded for six characteristics that seemed of some importance. This reveals comparative differences and perhaps tendencies, as shown by graphs 3 and 4, that would merit further investigation.

It should be kept in mind, however, that the differences are group differences for our particular sample -- not individual differences of each preceptor and his interns based on matched ratings man-to-man. (The same could be said of graph 2 (p. 25). That is, only the number of ratings, expressed as a percentage of the total are compared, as assigned to each characteristic by the interns. The overlay graph 3 (p. 28) makes possible a direct comparison of the preceptor's ratings of each trait to the interns' ratings. Tables 3 through 8 show a comparison of each preceptor's and their interns' ratings on each characteristic.

The great majority of the ratings cluster about the upper three grades for all six rated characteristics, as would be expected after examining graph 2, (p. 25). Graphs 3 and 4 do show, however, the individual characteristics to which most of the interns and preceptors assign high and low felt-values. The characteristics on which most interns feel that the preceptors do an excellent job are effectiveness in transmitting standards of ethics, professional attitude and conduct, and sympathetic attitude toward the intern's needs. The

GRAPH 3: DISTRIBUTION OF PRECEPTORS' SELF-RATINGS ON SIX CHARACTERISTICS
(Compare Graph 4)





KEY TO CHARACTERISTICS

I: Effectiveness in Imparting Management Techniques

II: Effectiveness in Imparting Professional Information

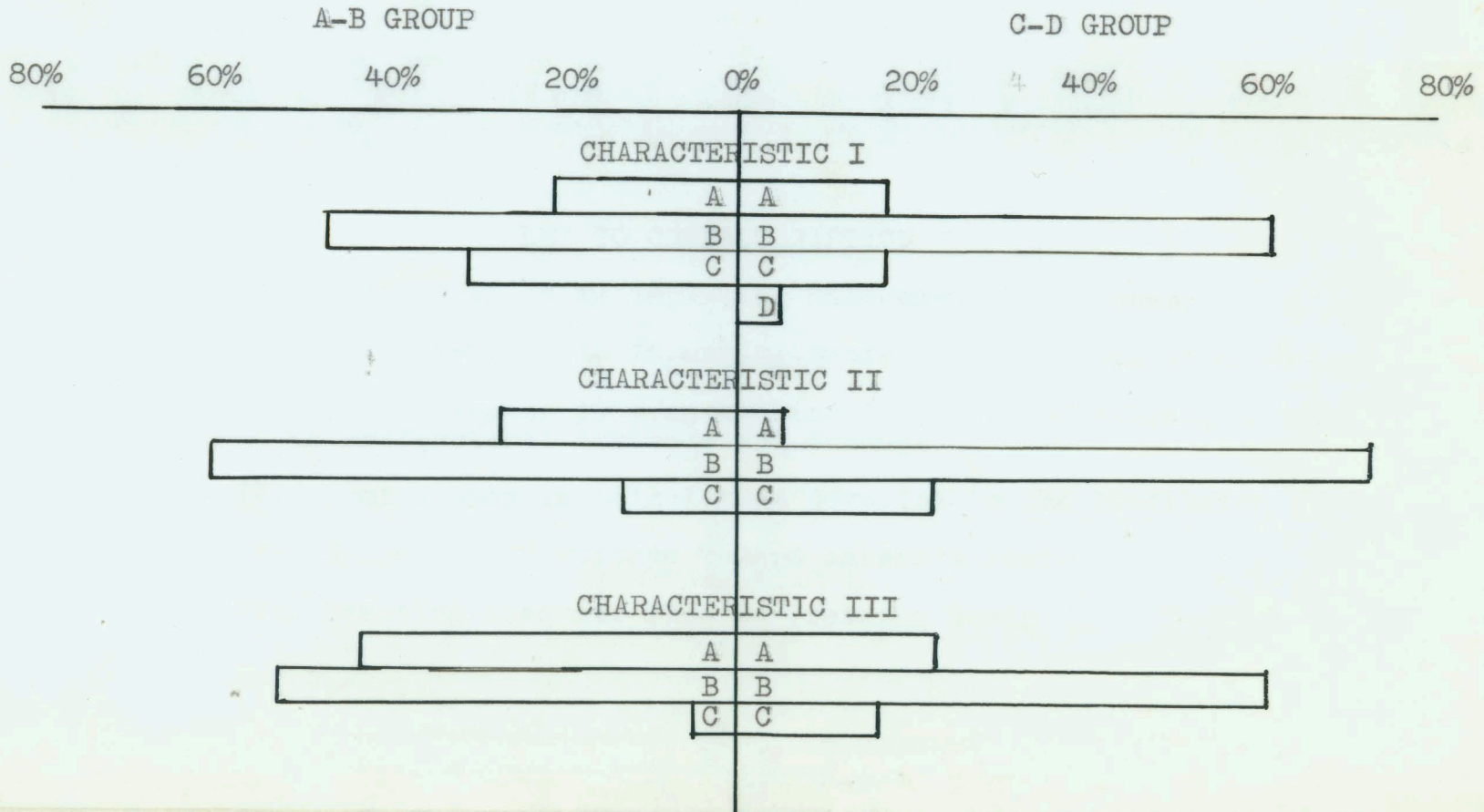
III: Effectiveness in Transmitting Standards of Ethics, Professional Attitude and Conduct

IV: Proficiency in Stimulating Devotion to the Profession

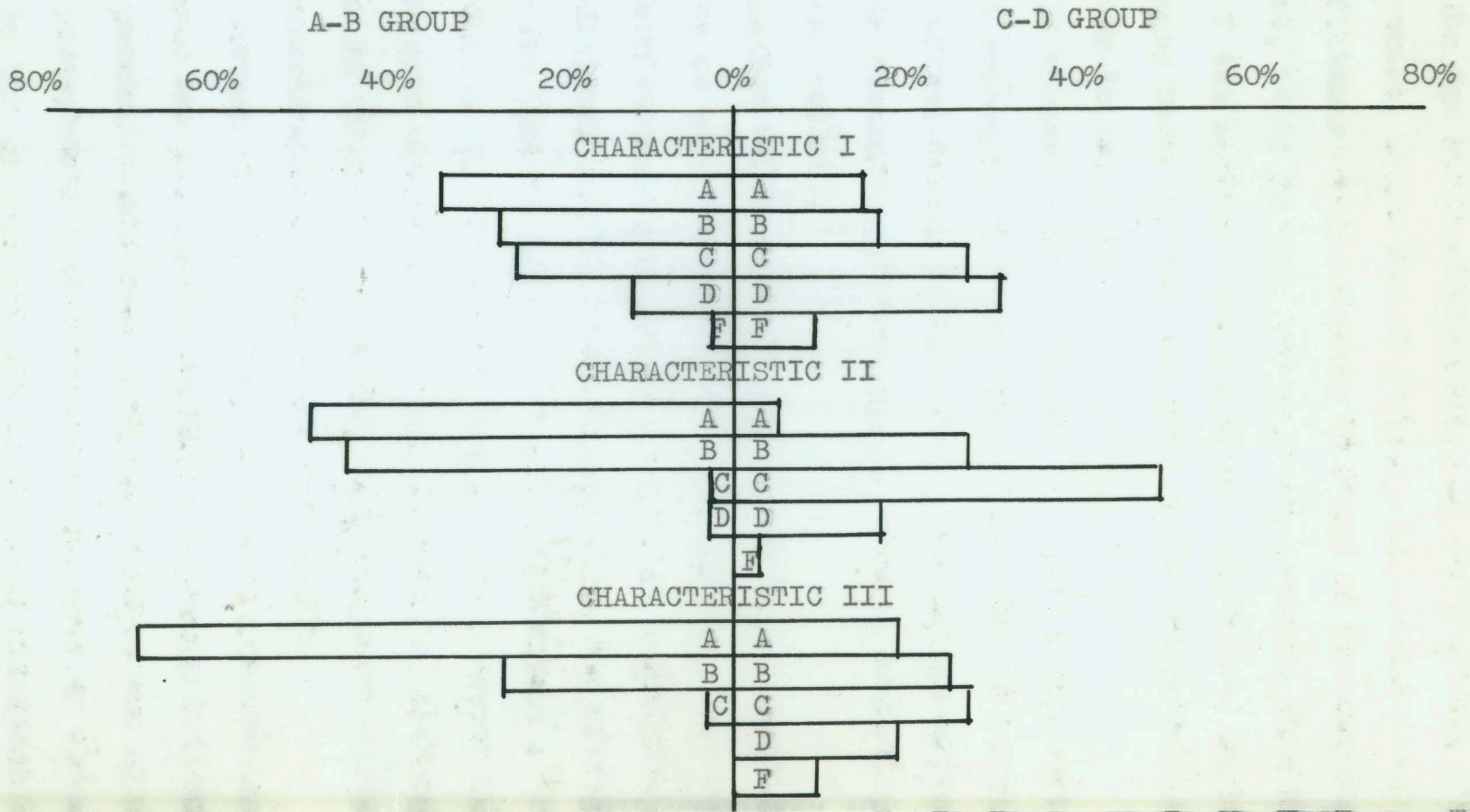
V: Sympathetic Attitude Toward Intern's Needs

VI: Devoting Adequate Time to Training Needs

GRAPH 3: DISTRIBUTION OF PRECEPTORS' SELF-RATINGS ON SIX CHARACTERISTICS
(Compare Graph 4)



GRAPH 4: DISTRIBUTION OF INTERNS' RATINGS OF THEIR PRECEPTORS ON SIX CHARACTERISTICS
(Compare Graph 3)



majority of the preceptors' self-ratings of excellent performance are for their effectiveness in transmitting standards of ethics, professional attitude and conduct, and for their proficiency in stimulating devotion to the profession. By contrast, it is to this latter characteristic that the majority of the interns' C-ratings are attributed, particularly among those interns who rate their preceptors overall as being in group C-D.

On all characteristics, preceptors give themselves most commonly a rating of "B," and this self-rating is highest for their effectiveness in imparting professional information and in transmitting standards of ethics, professional attitude and conduct.

The number of "D" and "F" ratings by both preceptors and interns on any characteristic is extremely low. Only on their effectiveness in imparting management techniques and their proficiency in stimulating devotion to the profession do preceptors (all in group C-D) assign themselves a "D" rating. Only a few "D" and "F" ratings are assigned with respect to most characteristics by the interns, although the number is relatively high for the preceptor's effectiveness in imparting management techniques (25%).

The pattern of these ratings reveal characteristics that interns and preceptors consider the preceptor's strong and weak points. Still more pertinent results are obtained when the preceptor's self-ratings are compared to those assigned by the preceptor's own interns, as discussed below.

TABLE 3: COMPARISON OF PRECEPTOR'S AND INTERN'S RATING OF PRECEPTOR-EFFECTIVENESS IN IMPARTING MANAGEMENT TECHNIQUES

Preceptor's Serial Number	Ratings by Interns (1 to 4) 1	2	3	4	Overall Median Rating of Preceptor by His Interns	Preceptor's Self-rating
28	A	A	B		A	B
34	B	A	B		A	B
43	A	A			A	B
44	A	C			A	C
60	B	A	D		A	C
85	A	A	C		A	C
88	A	A			A	B
23	B	C			A-B	C
32	B	A			A-B	A
38	D	B			A-B	C
61	A	A			A-B	C
3	B	B	C	C	B	B
11	D	C	A	D	B	B
12	A	D			B	B
13	B	A			B	A
14	B	A	B		B	B
20	C	C			B	C
24	C	C			B	A
59	A	C	F		B	A
68	C	B			B	B
79	D	D	C	C	B	B
33	C	A	B		B	A
64	B	B			B	B
1	D	A	D		C	A
18	C	D			C	B
26	C	C	F		C	F
36	D	D	F		C	C
37	A	B			C	C
47	C	B			C	B
50	D	B			C	A
52	C	D			C	B
53	B	A			C	B
54	C	C	D	C	C	B
66	A	B			C	B
73	D	B			C	B
55	A	D			C-D	C
69	C	C			C-D	B
71	A	D			C-D	B
72	F	D			C-D	B
83	B	D			C-D	B
10	C	F			D	A

Effectiveness in Imparting Management Techniques

Of the six characteristics on which interns rated their preceptors, preceptors in group A-B and their interns vary most in their rating of the preceptor's effectiveness in imparting management techniques. Twenty-four of the 59 interns rate their preceptor lower than "B," and seven of the 23 preceptors rate themselves lower than "B" (see table 3, p. 31). There thus appears to be a difference of opinion, particularly among the interns, as to how effective the superior-rated preceptors are in imparting management techniques.

In the group rated as less-than-superior (the C-D group), 13 of the 41 interns rate their preceptor higher than "C." Fifteen of the 18 preceptors rate themselves higher than "C" on this characteristic, and only one preceptor agrees with all his interns on the higher rating. The preceptor's self-rating on this characteristic, as on all five other characteristics, follows the same general pattern as their median ratings: superior-rated preceptors tend to recognize their superiority; preceptors rated less-than-superior tend to rate themselves higher.

Effectiveness in Imparting Professional Information

Superior-rated preceptors and their interns agree quite well in their rating of the preceptor's effectiveness in imparting professional information. Only three of the 59 interns and three of the 23 preceptors scored this characteristic lower

TABLE 4: COMPARISON OF PRECEPTOR'S AND INTERN'S RATING OF PRECEPTOR-EFFECTIVENESS IN IMPARTING PROFESSIONAL INFORMATION

Preceptor's Serial Number	Ratings by Interns (1 to 4) 1	2	3	4	Overall Median Rating of Preceptor by His Interns	Preceptor's Self-rating
28	A	A	B		A	C
34	A	A	A		A	B
43	A	B			A	B
44	A	A			A	B
60	A	A	A		A	B
85	A	A	A		A	C
88	A	B			A	B
23	A	B			A-B	B
32	B	B			A-B	A
38	B	A			A-B	B
61	A	B			A-B	B
3	A	A	B	B	B	C
11	B	A	A	A	B	B
12	B	B			B	A
13	B	B			B	A
14	B	A	A		B	B
20	B	B			B	B
24	C	B			B	B
59	B	B	B		B	B
68	A	A			B	A
79	D	B	C	A	B	A
33	B	B	A		B	B
64	B	B			B	A
1	C	B	C		C	B
18	B	C			C	B
26	C	C	B		C	B
36	C	C	B		C	B
37	F	C			C	B
47	D	D			C	B
50	D	B			C	B
52	B	A			C	B
53	C	C			C	B
54	B	C			C	C
66	A	C	C	C	C	B
73	B	C			C	A
55	C	D			C-D	B
69	D	B			C-D	B
71	C	C			C-D	C
72	C	C			C-D	C
83	B	D			C-D	B
10	B	D			D	C

than a "B." This seems to indicate that superior-rated preceptors and their interns are almost unanimously agreed that a commendable job is done in this area.

The differences between preceptors and interns in group C-D in rating these characteristics persists here, as 13 of 59 interns and 14 of 23 preceptors rate performance higher than "C" (see table 4, p. 33).

Effectiveness in Transmitting Standards of Ethics, Professional Attitude and Conduct

Of the six preceptorial characteristics, superior-rated preceptors and their interns show the most consistent pattern of ratings on the effectiveness in transmitting standards of ethics, professional attitude and conduct. Only two interns and one preceptor assign a "C" rating to this characteristic. This finding suggests that one of the most commonly observed features of a superior-rated preceptor is his ability to impart to neophytes a feeling for standards of ethics and professional conduct. Further investigation would determine whether this characteristic so significant for both an occupation and its public marks superior preceptors with similar consistency among other groups of pharmacists. In the group rated less-than-superior 15 preceptors (of 18) and 18 interns (of 41) feel this characteristic had been exhibited at a level higher than "C" (see table 5, p. 35).

TABLE 5: COMPARISON OF PRECEPTOR'S AND INTERN'S RATING OF PRECEPTOR-EFFECTIVENESS IN TRANSMITTING STANDARDS OF ETHICS, PROFESSIONAL ATTITUDE AND CONDUCT

Preceptor's Serial Number	Ratings by Interns (1 to 4) 1	2	3	4	Overall Median Rating of Preceptor by His Interns	Preceptor's Self-rating
28	A	B	A		A	B
34	B	A	A		A	B
43	A	A			A	A
44	A	A			A	B
60	A	A	A		A	B
85	A	A	A		A	B
88	B	A			A	A
23	B	A			A-B	B
32	B	A			A-B	A
38	A	A			A-B	B
61	A	A			A-B	B
3	A	A	A	A	B	A
11	C	B	A	A	B	A
12	B	B			B	B
13	A	B			B	A
14	A	A	A		B	C
20	B	B			B	B
24	B	A			B	B
59	A	B	B		B	A
68	A	A			B	A
79	C	A	A	B	B	B
33	B	A	A		B	A
64	A	A			B	A
1	C	A	B		C	B
18	B	B			C	C
26	C	B	A		C	B
36	D	B	C		C	B
37	F	C			C	B
47	D	F			C	B
50	C	C			C	A
52	A	B			C	B
53	D	D			C	B
54	D	B			C	A
66	A	A	A	A	C	A
73	B	C			C	B
55	C	F			C-D	B
69	D	B			C-D	B
71	A	F			C-D	C
72	D	B			C-D	C
83	C	D			C-D	B
10	C	C			D	A

Proficiency in Stimulating Devotion to the Profession

On this preceptorial characteristic, neither the superior group nor the less-than-superior show noteworthy variance from their rating pattern for the five other characteristics. Agreement remains high among the superior-rated preceptors and their interns, while disagreement is still a notable feature within the C-D group (see table 6, p. 37).

Sympathetic Understanding of, and Attitude Toward Intern's Needs

A remarkable feature of the ratings on this characteristic is the variance among preceptors and interns in the C-D group. Twenty-eight interns of 41 and 15 preceptors of 18 ascribe to this characteristic a higher grade than the preceptor's median rating (see table 7, p. 38).

This does not mean that preceptors and interns who give an "A" or "B" rating to this characteristic are necessarily wrong in doing so. It is not surprising if preceptors who are rated over-all as less-than-superior will in fact perform commendably on certain aspects of the preceptorship. This might be the case with respect to a sympathetic understanding of the intern's needs, since there is high disagreement among interns and preceptors on this point.

Devoting Adequate Time to Intern's Training Needs

From the comments of preceptors rated superior and less-than-superior, it was expected that more interns would rank

TABLE 6: COMPARISON OF PRECEPTOR'S AND INTERN'S RATING OF PRECEPTOR-PROFICIENCY IN STIMULATING DEVOTION TO THE PROFESSION

Preceptor's Serial Number	Ratings of Interns (1 to 4) 1	2	3	4	Overall Median Rating of Preceptor by His Interns	Preceptor's Self-rating
28	A	A	A		A	A
34	B	A	A		A	B
43	A	A			A	B
44	A	A			A	B
60	A	A	A		A	C
85	A	A	B		A	B
88	A	B			A	B
23	A	C			A-B	C
32	C	A			A-B	A
38	A	A			A-B	A
61	A	A			A-B	B
3	A	A	B	B	B	A
11	C	B	A	A	B	A
12	B	C			B	C
13	A	C			B	A
14	A	C	A		B	B
20	C	B			B	C
24	B	B			B	A
59	A	B	C		B	A
68	A	B			B	A
79	B	B	B	B	B	B
33	B	B	B		B	A
64	A	A			B	B
1	B	A	B		C	B
18	C	C			C	C
26	C	C	A		C	B
36	C	C	B		C	B
37	B	C			C	C
47	C	B			C	B
50	C	C			C	B
52	A	C			C	C
53	C	C			C	C
54	C	C			C	A
66	C	A	C	C	C	A
73	C	C			C	B
55	C	C			C-D	B
69	C	C			C-D	C
71	C	C			C-D	B
72	F	B			C-D	B
83	C	C			C-D	B
10	C	D			D	D

TABLE 7: COMPARISON OF PRECEPTOR'S AND INTERN'S RATING OF PRECEPTOR'S SYMPATHETIC UNDERSTANDING AND ATTITUDE TOWARD TRAINEE'S NEEDS

Preceptor's Serial Number	Ratings by Interns (1 to 4) 1	2	3	4	Overall Median Rating of Preceptor by His Interns	Preceptor's Self-rating
28	A	A	A		A	A
34	C	A	A		A	B
43	A	A			A	A
44	A	A			A	A
60	B	A	A		A	B
85	A	A	A		A	B
88	A	A			A	B
23	A	B			A-B	B
32	B	A			A-B	B
38	C	A			A-B	B
61	A	B			A-B	B
3	A	A	A	A	B	A
11	C	D	A	A	B	B
12	B	B			B	B
13	A	A			B	A
14	A	A	B		B	C
20	B	B			B	A
24	B	A			B	A
59	A	B	C		B	B
68	A	B			B	A
79	A	B	A	B	B	B
33	B	A	C		B	A
64	C	B			B	B
1	C	B	B		C	B
18	C	B			C	B
26	B	A	A		C	C
36	B	A	B		C	B
37	C	B			C	B
47	A	C			C	B
50	B	C			C	B
52	C	B			C	B
53	C	C			C	C
54	A	B			C	B
66	B	B	B	A	C	A
73	F	B			C	C
55	A	D			C-D	B
69	B	A			C-D	B
71	B	C			C-D	C
72	A	C			C-D	C
83	B	B			C-D	B
10	A	F			D	B

TABLE 8: COMPARISON OF PRECEPTOR'S AND INTERN'S RATING OF PRECEPTOR-WILLINGNESS TO DEVOTE ADEQUATE TIME TO INTERN'S TRAINING NEEDS

Preceptor's Serial Number	Ratings by Interns (1 to 4) 1	2	3	4	Overall Median Rating of Preceptor by His Interns	Preceptor's Self-rating
28	A	A	B		A	B
34	B	A	A		A	B
43	A	B			A	A
44	A	A			A	C
60	B	A	A		A	B
85	A	B	A		A	B
88	A	A			A	C
23	A	B			A-B	B
32	C	B			A-B	B
38	B	A			A-B	B
61	A	B			A-B	B
3	B	A	C	A	B	B
11	B	B	B	C	B	C
12	B	A			B	C
13	B	B			B	A
14	D	A	B		B	B
20	B	B			B	B
24	A	B			B	B
59	A	A	C		B	B
68	B	A			B	A
79	B	C	A	C	B	B
33	B	C	B		B	B
64	C	C			B	A
1	C	C	C		C	B
18	A	B			C	B
26	D	A	B		C	B
36	A	B	C		C	C
37	C	B			C	C
47	B	B			C	A
50	B	C			C	A
52	C	C			C	C
53	C	C			C	B
54	B	B			C	C
66	A	C	B	B	C	B
73	C	C			C	C
55	A	D			C-D	C
69	D	C			C-D	C
71	C	F			C-D	C
72	B	C			C-D	C
83	C	C			C-D	B
10	B	F			D	B

their preceptor lower on devoting adequate time to the intern's needs and on the preceptor's sympathetic understanding than they do on any of the other four characteristics. Preceptors mention that they do not have sufficient time to spend with the intern particularly in dealing with matters of professional ethics and conduct, talking with the intern about his problems and encouraging extra reading.

If such is the case, it should show up in the intern's ratings, unless he and the preceptor hold quite different concepts with respect to "adequacy" on these points. Whether or not different frames of reference do largely account for the observed differences remains to be investigated. Only nine interns of a total of seven preceptors in group A-B rate their preceptor lower than "B" on this latter characteristic, while 17 interns of 41 in the C-D group rate their preceptors higher than "C" (see table 8, p. 39). As previously discussed, many preceptors even in the C-D group are rated high on their sympathetic understanding of the intern's needs. Preceptors as a whole feel relatively inadequate in this area however, as shown in graph 3, p. 28, since it is to this characteristic that the largest number of preceptors assign themselves a "C" grade (18% in group A-B; 50% in group C-D).

The interns' and preceptors' ratings of the adequacy of time devoted to training may be placed in relation to the number of pharmacists in each training pharmacy, to provide a different perspective. Regardless of the number of pharmacists that work with the intern, interns still vary widely in how

they rate their preceptors on this point. However, most of the preceptors, in both the groups rated as superior and as less-than-superior, who rank themselves as "C" on this preceptorial characteristic, work in a pharmacy where less than three pharmacists are employed. In 15 of 41 cases, there were three pharmacists.[1]

This finding perhaps indicates one reason why preceptors rate themselves relatively low on this characteristic. Preceptors who feel that they are not devoting adequate time to their interns may be reflecting, without realizing it, a pressure generated by insufficient manpower. A discussion of the relation between the number of pharmacists, the type of pharmacy they work in and the preceptors' median ratings is presented in chapter IV, p. 76 .

When the interns' and preceptors' ratings of this characteristic are placed in relation to the type of pharmacy in which the preceptor works, no pattern is observed. Any unobserved relationship might be obscured here by the small sample size and the numerous gradations in types of pharmacies where these preceptors train their interns, or by overshadowing from stronger influences on the ratings. As discussed in chapter IV, p. 69), it is inferred that the nature of the pharmacy does have some effect on the internship experience however;

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1. In Wisconsin, there are, as of 1964, 88 pharmacies out of 1092 that employ three pharmacists, Proceedings, National Association of Boards of Pharmacy, (1964), 113.

and a larger sample and specially designed methodology might unmask such influence. A table placing the preceptor's median rating in relation to the type of pharmacy in which he works is presented in chapter IV, p. 70.

GENERAL COMMENTS

A significant finding from a comparison of the intern's evaluation of his preceptor with his preceptor's self-evaluation is that a pattern does seem to exist. Some preceptors are clearly ranked as superior by their interns; and with the exception of these interns' opinions of the preceptor's effectiveness in imparting management techniques, agreement is high. Those preceptors ranked as superior tend to agree with their interns.

However, when the group rated less-than-superior is considered, the ratings are more disparate. Interns disagree on many characteristics. No way has yet been worked out to show the extent to which these differences stem largely from different interpretations of the terms of reference. The fact that there are not only disagreements but lower ratings are much more numerous suggests that a real difference was established between this group of preceptors and the A-B group. However, some may be better preceptors than their over-all ratings suggest. The superior-rated group has been "distilled from the menstruum of preceptors," but the distillation process may not yet be

complete. To bring this process to a new stage, it will be helpful when more interns have experienced the controlled internship. With more experience and more interns to rate them, and for other reasons discussed above, some preceptors in group C-D might well pass over into group A-B.

CHAPTER III: SOME PERSONAL CHARACTERISTICS OF THE PRECEPTOR

PERSONAL QUALITIES

At a pivotal time in the career of a neophyte of pharmacy, he is guided into patterns of attitude, thought and practice by a preceptor, who is himself, inescapably, the most influential model of a pharmacist during these 12 impressionable months. The most promising intern can be hampered in his zeal, disillusioned in his profession and taught unprofessional methods by an incompetent, uninterested or lax preceptor. On the other hand, an intern who is lazy, belligerent, or prone to unethical conduct can be improved under the guidance of a competent, alert preceptor. Since the preceptor can make such a difference in starting a young pharmacist in the right direction, it becomes of prime importance to improve our ability to distinguish different levels of preceptorship and to understand better the interplay of component factors that affect this teaching function -- ability, attitudes, experience, personality, knowledge, motivation, and the professional setting.

Academic Achievement

As a dimension of the preceptors here studied, comparative data were obtained on their cumulative academic achievement during college preparation for their careers (available

for 18 "A-B" preceptors and 17 "C-D" preceptors). Based on a four-point grading system (A = 4; D = 1), the cumulative grade-point average[1] of preceptors in group A-B ranged from 2.2 to 3.5, with a median at 2.9; and in group C-D ranged from 2.2 to 3.6, with a median of 2.8. Thus, the two groups have very similar levels of academic achievement, although within each group, wide differences are found between individuals. Thus, the evidence does not support the hypothesis that as a group the pharmacists rated superior as preceptors were earlier superior academically as pharmacy students.

Professional Experience

Because the preceptors vary widely in age and date of graduation, there is a wide difference in the amount of experience they are likely to have had as pharmacists (further affected in some instances by illness). Table 9, p. 46 suggests that among preceptors whose former interns rate them as superior on our particular criteria, age (experience?) may not be decisive. On the other hand, among preceptors less well regarded ("C-D"), 15 of 18 are younger than 46 years of age. Does the difference in age distribution between the A-B and

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1. The number of credits taken in each course each semester was multiplied by the numerical equivalent of the grade received in each course (A = 4, B = 3, C = 2, D = 1) and the sum of these products was determined. The total number of credits taken during the period of academic training was divided into the sum of the product of credits X grade received. This yielded the cumulative grade point average. Averages are those of the universities concerned, based on official records.

TABLE 9: AGE DISTRIBUTION OF PRECEPTORS; "SUPERIOR" (A-B) AND "NOT-SUPERIOR" (C-D)

Age When Rated	Number of Preceptors in "A-B"	in "C-D"
25 to 35	4	7
36 to 45	7	8
46 to 55	5	2
56 to 65	7	1
TOTAL	23	18

TABLE 10: NUMBER OF INTERNS TRAINED BY PRECEPTORS IN GROUP A-B AND GROUP C-D DURING PERIOD 1959-1963

Number of Interns Trained	Number of Preceptors in "A-B"	in "C-D"
0 to 3	13	9
4 to 8	10	9
TOTAL	23	18

C-D groups mean that relatively few of the older pharmacists of limited preceptorial ability volunteer for such service; or does it perhaps mean that many of the less effective preceptors may surmount their handicaps in the maturity of age and experience? We cannot know, but the question of age distribution of the more and the less effective preceptors would seem to merit further attention whenever other groups of preceptors can be studied.

When experience as a preceptor under the controlled internship program is considered, there is no real difference between preceptors in either group. All have been preceptors since the inception of the controlled program, except for three in each group (most of whom were unable to get an intern during 1964 and hence had one year less experience). About a third of the pharmacists had experience training apprentices, ranging from three to 20 years, prior to the controlled internship program.

Table 10, p. 46 shows the number of interns trained by preceptors in group A-B and group C-D during 1959-1963. The proportion of preceptors in both groups who trained four or more interns is nearly the same (0.44 and 0.50). Since the proportion is even lower for group A-B, we have not substantiated the hypothesis that the proportion of the preceptors having experienced the training of four or more interns would be larger in the group rated superior than in the group rated not-superior.

Within the limits of present observations, therefore, it cannot be shown that the length of experience as pharmacist or as preceptor, nor the number of interns trained, nor anything associated with a pharmacist's demonstrated ability academically has any probable relationship to preceptorial effectiveness as here differentiated.

Purely personal qualities often are hard to assess, hence not taken into account adequately, in considering a pharmacist's preceptorial function. Common agreement on the import of personality differences does not permit us to ignore them here, however tentative may be the approach and findings.

When interns are asked about the qualities they would look for in an ideal preceptor, they suggest most frequently the 12 listed in table 11, p. 49. Such qualities, except for intelligence, are not so much linked to academic ability or physical vigor of the preceptor as they are to personality.

Some former interns are disatisfied with their practical experience in the belief that their preceptors did not spend enough time with them or were too concerned with the business aspect of the pharmacy, supposedly trying to maximize the "profit" from an intern's services. Such complaints often can be related to the preceptor's personality.

Some disatisfactions do not spring from the preceptor's qualities alone. A clash of personality between the intern and preceptor can seriously cloud the former's impressions, as can an unrealistic expectation of ideal qualities from some preceptorial paragon. Whether they are right or wrong,

TABLE 11: MOST COMMON QUALITIES INTERNS WOULD LOOK FOR IN AN IDEAL PRECEPTOR

Quality	Number of Interns Who Mentioned Each Quality
Interested	21
Ethical	17
Professional	16
Understanding	16
Patient	12
Honest	9
Sense of Humor	8
Critical	8
Intelligent	7
Well-informed	7
Good teacher	6
Businesslike	5

prejudiced or fair, the intern does look critically at his preceptor as a human being. For these reasons it was felt that an attempt should be made to learn more about the preceptor's inherent temperamental qualities.

SURVEY OF TEMPERAMENT

Personality, Temperament and Character

The layman may use the three terms personality, temperament and character interchangeably, but there is a difference that is necessary to recognize in the present context. Moreover, Shaffer points out, the "concept of personality is difficult to treat with precision, for it corresponds to no single or simple trait. Personality does not depend upon one or a few characteristics only, but upon the interaction of practically all of the traits of the individual."[2]

Fromm defines personality as "the totality of inherited and acquired psychic qualities which are characteristic of one individual and which make the individual unique."[3] Allport's definition of personality as the "entire system of relatively permanent tendencies, both physical and mental, that are distinctive of a given individual, and determine his

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2. Laurance F. Shaffer, The Psychology of Adjustment, Houghton Mifflin Company, New York (1936), 282.

3. Erich Fromm, Man for Himself, Holt, Rinehart and Winston, New York (1947), 50.

characteristic adjustments to his material and social surroundings,"[4] emphasizes the broad nature of personality.

Temperament, according to Allport, "refers to the characteristic phenomena of an individual's emotional nature including his susceptibility to emotional stimulation, his customary strength and speed of response, the quality of his prevailing mood, and all peculiarities of fluctuation and intensity in mood; these phenomena being regarded as dependent upon constitutional make-up, and therefore largely hereditary in origin."[5]

The distinction is underscored by Ohvall when he says, "some personality traits believed to be innate are termed the biogenic or inherited personality. These inherited traits are modified by early life experiences to form a quasi-permanent disposition known as one's temperament."[6] To distinguish character from temperament, Fromm states, "Temperament refers to the mode of reaction and is constitutional and not changeable; character is essentially formed by a person's

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4. Gordon W. Allport, Personality and Social Encounter, Beacon Press, Boston (1960), 145-146.

5. Gordon W. Allport, Personality: A Psychological Interpretation, Henry Holt and Company, New York (1937), 54.

6. Richard A. Ohvall, A Study of the Need and Feasibility of Establishing Differential Guidance Standards for Pharmacy Undergraduates in the Extended Curriculum, unpublished Ph.D. thesis, University of Wisconsin (1962), 212.

experiences, especially of those in early life, and changeable, to some extent, by insights and new kinds of experience."[7]

As a preliminary approach to choosing some tools and developing some insight with respect to this inner life and reaction pattern affecting preceptorship, it was decided to make some assessment of "temperament." It will be clear from the preceding paragraphs that the findings cannot tell us about that broader spectrum of psychic qualities called the preceptor's "personality." Rather, we are studying only the non-changeable, largely hereditary aspects of his personality. Hence, the ten traits to be discussed are those which have remained relatively unaltered by the life experiences of a preceptor, the relatively permanent aspect of his personality.

The Guilford-Zimmerman Temperament Survey

The Guilford-Zimmerman Temperament Survey appeared to be as useful as any other single psychological tool that would be practicable under conditions of the present project, as it could provide information on ten traits which are considered to be factors that could affect the training an individual preceptor is able to give.

The Guilford-Zimmerman Temperament Survey provides information on personality traits, that to a greater or lesser extent, are possessed by all people. This survey has a

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7. Fromm, Man for Himself, p. 52.

reliability coefficient (averaging 0.80) as high as most other personality tests. Since pharmacists are busy people, the Temperament Survey has the heuristic advantage of a reasonable time requirement, its 300 questions being answerable in approximately 50 minutes. Also an advantage is a range of best and poorest C-scores, derived from experimental work with the Survey, which help predict how good a respondent will be in a supervisory capacity. Several characteristics of the Guilford-Zimmerman Survey are:

1. It is based upon the responses of normal everyday people, not of the overtly maladjusted or the institutionalized.
2. Its scores are set up by internal analysis, by study of the "going together" of groups of items.
3. Responses are taken at face value. Their significance is assumed to be given by their obvious content.
4. The respondent may endorse as many or as few of the items as he wishes; his choices are not forced or constrained.[8]

Import of the Survey to Preceptorship

The degree to which ten traits are developed within the individual is suggested or roughly estimated by proper use of the Guilford-Zimmerman Temperament Survey. All these traits have some interest in studying the preceptor as a practical teacher. The preceptor's score on "general

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8. Robert L. Thorndike and Elizabeth Hagen, Measurement and Evaluation in Psychology and Education, 2nd edition, Wiley, New York (1961), 337.

activity" gives us some idea of his drive, energy and efficiency. Scores on "restraint" indicate whether the preceptor is serious-minded, restrained or happy-go-lucky and impulsive. "Ascendance" indicates whether the preceptor is in the habit of leading or following, whether he can speak readily with others or is hesitant to do so.

The preceptor's score on "sociability" indicates whether or not the preceptor is at ease with others, establishes intimate rapport, or is withdrawn and reserved. Whether or not a preceptor is optimistic, cheerful, pessimistic or gloomy is shown by his score on "emotional stability." High scores on "objectivity" indicate that the preceptor shows insensitivity and less egoism than would be indicated by a low score; low scores mean touchiness or hypersensitivity. The "friendliness" score on the Survey indicates whether or not the preceptor is likely to tolerate hostile action, respect other people or show belligerence and contempt for others. Scores on "thoughtfulness" will indicate whether or not a preceptor is introvert, mentally poised or extrovert and mentally disconcerted, while his score on "personal relations" indicates whether he is tolerant or hypercritical of people. Finally, the preceptor's score on "masculinity" will indicate the degree to which his interests and behavior are characteristic of men, and thus indicate the likelihood that he may be better understood and accepted by them.[9]

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9. See Guilford and Zimmerman, Manual, p. 2-3, 8-10.

"Of course, most people do not score at either extreme on these dimensions. Here, as elsewhere, a continuous range of variation with most people occupying an intermediate position is the characteristic pattern. Most people are neither outstandingly active nor conspicuously lethargic, neither clearly ascendant nor clearly submissive. People can rarely be well described by clear-cut personality types. They are described as showing different traits in varying degrees."[10]

The Guilford-Zimmerman Temperament Survey probably has its main value when it is considered for each individual separately. It provides little basis for corrective action because we are dealing here with relatively permanent aspects of personality. Results from the Survey could be used to help an individual toward a better accommodation of work circumstances to his temperament configuration, or toward a more suitable type of position or of vocation, or to understand his temperamental aptitude for supervisory work. Here we are mainly interested in the individual temperament only as a part of one of two groups: A-B or C-D. We would like to know, for example, are trait differences among preceptors sufficiently patterned to help account for their being rated differently by former interns (a group superior, and a group who are not)? Are some traits more characteristic of superior-rated preceptors than are others? Could the Temperament Survey perhaps be developed into a device having some prognostic value as to

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10. Thorndike and Hagen, Measurement, p. 336.

TABLE 12: RAW SCORES FROM "PROFILE CHARTS" (See Appendix E, p. 184)

Preceptor Number	Traits G	R	A	S	E	O	F	T	P	M
P 28 A	23	21	20	25	28	26	26	21	26	21
P 34 A	22	16	19	SH*	15	17	9	19	23	18
P 43 A	28	12	22	24	28	22	7	14	17	23
P 44 A	22	18	18	?**	26	22	12	7	24	21
P 60 A	5	16	6	5	6	14	17	23	21	16
P 85 A	SH	24	?	?	24	25	27	20	?	?
P 88 A	19	25	15	22	26	26	21	23	22	SH
P 23 A-B	22	20	16	17	21	22	24	23	18	14
P 32 A-B	23	SH	21	30	27	29	26	12	22	23
P 38 A-B	25	18	13	19	21	17	18	14	23	19
P 3 B	9	23	5	10	13	22	19	20	26	18
P 12 B	12	20	20	15	27	21	23	14	26	21
P 13 B	23	19	21	18	17	18	14	19	21	19
P 14 B	?	?	14	11	19	19	15	14	16	12
P 20 B	15	21	8	15	28	27	27	8	29	SH
P 24 B	20	20	15	22	21	17	22	20	23	18
P 59 B	22	20	18	21	18	19	24	16	18	12
P 64 B	18	24	20	21	23	24	22	11	22	22
P 68 B	13	17	13	21	28	24	25	SH	24	18
P 79 B	24	21	23	18	22	18	23	19	18	14
P 1 C	27	20	23	29	SH	12	7	22	15	16
P 18 C	21	16	12	16	20	19	13	21	17	SH
P 26 C	14	23	11	22	26	25	28	14	28	21
P 37 C	12	14	19	21	25	22	20	12	25	18
P 50 C	19	18	?	23	18	12	9	27	15	18
P 52 C	26	20	25	29	23	26	16	21	23	17
P 53 C	15	20	?	28	27	24	19	9	21	17
P 54 C	28	20	18	23	22	14	11	23	18	14
P 66 C	6	19	15	5	8	18	16	20	12	?
P 73 C	26	21	15	10	26	20	12	SH	20	24
P 55 C-D	27	14	15	25	24	24	16	20	21	30
P 69 C-D	23	22	14	23	21	19	21	16	20	19
P 71 C-D	20	19	SH	13	18	15	10	8	15	20
P 72 C-D	10	20	17	25	13	19	18	12	9	13
P 83 C-D	21	23	11	16	15	10	8	22	13	12
P 10 D	11	22	6	12	19	16	19	22	25	12

* "SH" designates a trait score that failed to meet "Split-half reliability" test.

** Respondent invalidated this trait score by using too many "?" answers (indecision) on the answer sheet.

NOTE: For explanation of trait abbreviations, see p. 58.

strengths and potential problems of prospective preceptors? Such questions make the tentative assessment of temperament traits among preceptors in our sample of general interest to pharmacy, even though this initial effort provides no definitive answers.

Interpretation of "Profile Charts"

Thirty-six preceptors completed answer sheets of the Temperament Survey in a manner that permit them to be utilized. Three other preceptors did not complete the Survey and two used so many indecisive ("?") responses on all traits so as to invalidate their scores.

The raw scores for each preceptor are shown in table 12, p. 56. Applying these figures to the "profile chart" in Appendix E, p.184 reveals each preceptor's temperament pattern.

To show the trends and patterns of various distributions of trait scores, the nearest T-score distribution is used instead of the raw score. The T-score sets the mean at 50 (to avoid negative scores) and sets each standard deviation at five points. Changing raw scores to standard scores does not alter the form of the distribution. Raw scores are used here for calculations of significance tests.

The medians of the nearest T-scores for preceptors in group A-B and group C-D on each trait are shown in table 13, p. 58. Most of the medians center around 50 to 55, or very close to a mean C-score of 5, or to a centile rank ranging

TABLE 13: MEDIAN OF NEAREST T-SCORES ON EACH TRAIT IN THE GUILFORD-ZIMMERMAN SURVEY FOR PRECEPTORS IN EACH GROUP

Trait	Group	Median
General Activity	A-B	60.0
	C-D	55.5
Restraint	A-B	55.5
	C-D	55.0
Ascendance	A-B	55.0
	C-D	50.0
Sociability	A-B	45.0
	C-D	55.5
Emotional Stability	A-B	55.5
	C-D	55.0
Objectivity	A-B	55.5
	C-D	50.5
Friendliness	A-B	65.5
	C-D	50.5
Thoughtfulness	A-B	50.0
	C-D	55.5
Personal Relations	A-B	55.0
	C-D	50.5
Masculinity	A-B	45.0
	C-D	40.5

from 40 to 70. Thus, the preceptors in the sample do not differ markedly from college men in general. The most obvious difference between the preceptors and the sample of college people on which the Survey's reliability was estimated, is the "masculinity" trait, on which both superior and not-superior-rated preceptors score below a T-score of 50. Such differences are not startling, however, amounting to no more than two standard deviations. When a test of significance of difference between the means for groups A-B and C-D on each trait are conducted, no significant difference is found on any trait at the one percent level of significance.[11]

The median of all T-scores for each preceptor, as calculated for table 14, p. 60, again shows that the medians cluster about 50 and 55. The raw data for each preceptor show no significant difference between the means of group A-B and group C-D at the one percent level of significance.

These findings do not support the hypothesis that the Guilford-Zimmerman Temperament Survey would show patterns of test scores that could help account for one group of pharmacists having been rated superior preceptors rather than not-superior. The results from this limited sample suggest a probability that temperament plays no major role among the

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11. The Student's t test was used to test the significance of the difference between means. See Allen L. Edwards, Experimental Design in Psychological Research, Rinehart and Company, New York (1951), 142 f.

TABLE 14: MEDIAN OF ALL T-SCORES FROM GUILFORD-ZIMMERMAN "PROFILE CHART" FOR EACH PRECEPTOR

Preceptor Number	Median of T-Scores
P 28 A	60
P 34 A	50
P 43 A	55
P 44 A	55
P 60 A	45
P 85 A	--
P 88 A	60
P 23 A-B	55
P 32 A-B	60
P 38 A-B	55
P 3 B	50
P 12 B	55
P 13 B	50
P 14 B	50
P 20 B	60
P 24 B	55
P 59 B	50
P 64 B	55
P 68 B	55
P 79 B	55
P 1 C	60
P 18 C	50
P 26 C	60
P 37 C	55
P 50 C	50
P 52 C	60
P 53 C	55
P 54 C	55
P 66 C	50
P 73 C	60
P 55 C-D	60
P 69 C-D	55
P 71 C-D	50
P 72 C-D	50
P 83 C-D	45
P 10 D	50

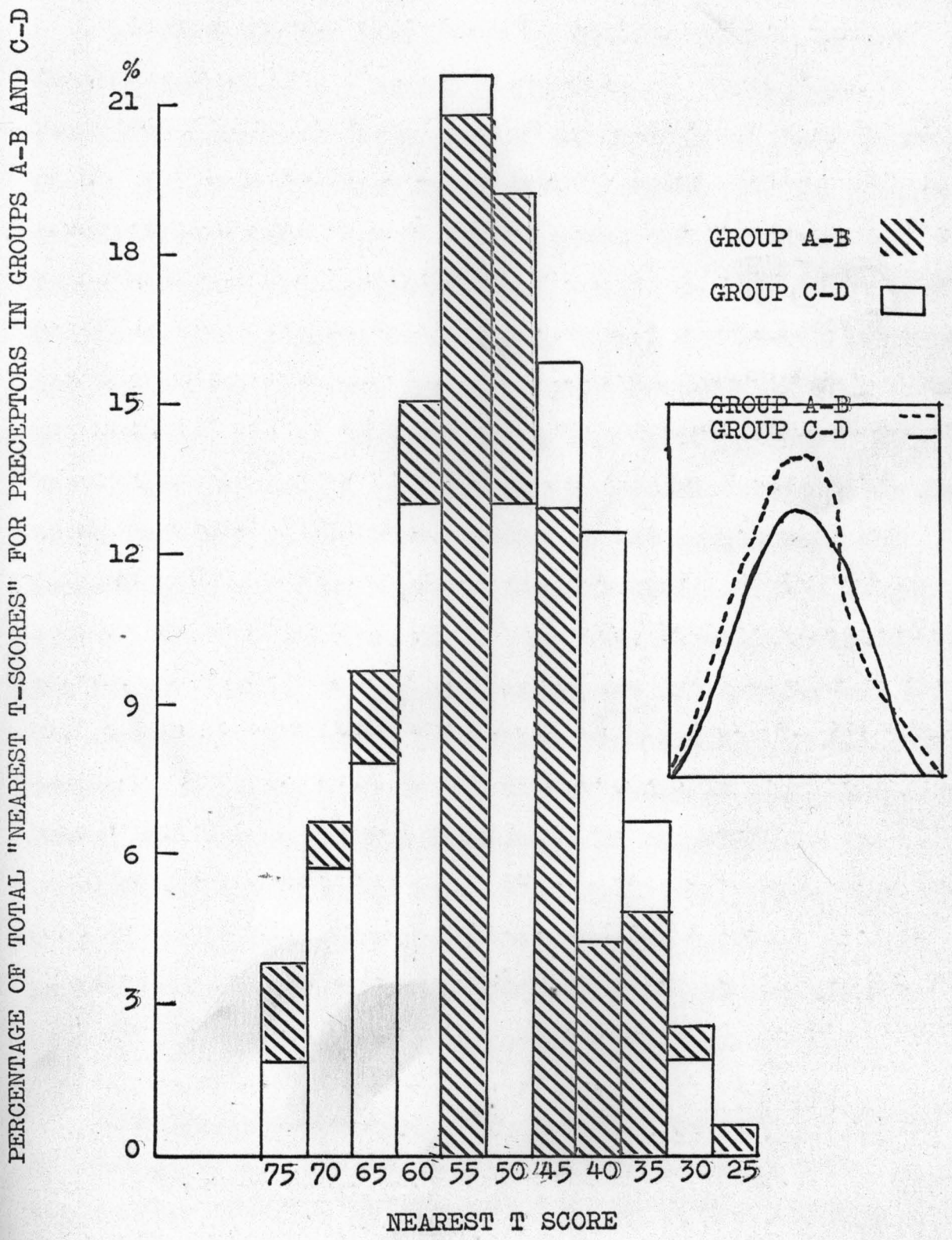
preceptors as a group in determining whether they are rated as superior or not, by their former interns.

The preceptor, regardless of how his interns react to him, appears, above all, to be temperamentally a man who does not differ markedly from the average college-educated man. Nor do preceptors differ markedly among themselves on their over-all pattern of traits. The highest median T-score was 60, the lowest 45, a difference of only three out of a possible ten standard deviations. Larger differences naturally occur on single traits between one preceptor and another, but when their over-all profiles are considered, no diagnostic differences between superior and not-superior ratings can be discussed.

How might this be accounted for? First of all the people who took part in this study are all Wisconsin pharmacists, all have a university education, and all are adults, and all volunteered to serve the state as pharmacy preceptors and were found to meet the qualifying standards. They thus have a great deal in common.

For the 20 preceptors in group A-B there were 187 traits obtained from the profile charts. Seven traits, or 3.7% of the total, had a "nearest T-score" of 75. For the 16 preceptors in group C-D, there were 153 traits obtained from the profile charts. Three traits, or 2.0% of the total had a "nearest T-score" of 75. In this way, preceptors in group A-B and group C-D were compared as to the percentage distribution of their "nearest T-scores" on all ten traits from

GRAPH 5: PERCENTAGE DISTRIBUTION OF "NEAREST T-SCORES" FROM THE GUILFORD-ZIMMERMAN TEMPERAMENT SURVEY ATTAINED BY PRECEPTORS IN GROUP A-B AND GROUP C-D



the Guilford-Zimmerman Temperament Survey (see graph 5, p. 62).

As shown by the line graph in the inset, both groups tend to approximate a normal distribution. Preceptors in group A-B have a slightly greater percentage of their traits in the "nearest T-score" range from 75 to 60 than do preceptors in group C-D; from 45 to 35, preceptors in group C-D have a greater percentage of their traits in this range than do preceptors in group A-B. The greatest difference between the two groups is found for a "nearest T-score" of 40. Since the T-scores are so arranged along the "profile chart" that the distribution will approximate the normal curve, it is obvious that the group of preceptors in the sample does not deviate markedly from a normal distribution. With a larger sample, the distribution might even more closely approximate the normal curve. Thus, when preceptors are compared as to the frequency with which they score high and low on all the traits as a group, they do not differ markedly from each other, nor from a pattern that would be observed for the average college-educated man. This again emphasizes that we seem to be dealing with preceptors who, as a group, are remarkably similar in their temperament profiles and who are notably similar to other college-educated men.

Supervisory Promise. Table 15, p. 64, shows the range of most favorable and least favorable C-scores in terms of supervisory promise, as determined by using the Guilford

TABLE 15: RANGES OF MOST AND LEAST FAVORABLE C-SCORES IN TERMS OF SUPERVISORY PROMISE, BASED UPON USE OF THE INVENTORIES WITH SUPERVISORY AND ADMINISTRATIVE PERSONNEL[a]

Trait	Most Favorable C-Scores	Least Favorable C-Scores
General Activity	6-8	0-1
Restraint	5-6	0-2; 9-10
Ascendance	7-9	0-4
Sociability	5-9	---
Emotional Stability	5-9	0-3
Objectivity	5-7	0-3
Friendliness	5-9	0-3
Thoughtfulness	5-8	0-3
Personal Relations	6-10	0-4
Masculinity	5-8	0-3

a. This table was drawn from Guilford and Zimmerman's Manual, p. 10. The terms "most favorable C-scores" and "least favorable C-scores" and the accompanying figures do not refer to preceptors from this study. See Profile Chart, Appendix E, p. 184 for C-score norms. The C-scale is so arranged that mean will be exactly at point 5.0 with the two limiting classes being called 0 and 10.

series of personality inventories with supervisory and administrative personnel. Since the preceptor actively supervises the intern during his period of practical training, how well preceptors approximate this pattern is of great interest. Table 16, p. 66 shows the distribution of each preceptor's centile-rank (called C-scores) on all traits in terms of the supervisory promise they show. There is a significant difference in the pattern for group A-B compared to group C-D (X^2 test, 0.05 significance level).[12] There is no significant difference, however, between the number of preceptors in group A-B and group C-D with respect to the number of most and least favorable C-scores each group possesses. Since there is a difference in terms of supervisory promise (pattern of the C-scores), the difference must come from certain individual traits. Table 17, p. 67 shows the number of preceptors who score favorably and unfavorably in terms of supervisory promise on each trait. A statistically significant difference appears between the two groups in the proportion of preceptors who score favorably in terms of supervisory promise on the trait called "general activity."[13] A significant difference also is found between groups on the trait called "personal relations" (in terms of least favorable C-scores).

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12. For method of using the chi-square test, see Paul G. Hoel, Elementary Statistics, Wiley and Sons, New York (1963), 157 f.

13. For calculation of Significance of Difference Between Two Proportions, see Edwards, Experimental Design, p. 73 f.

TABLE 16: NUMBER OF TRAITS ON WHICH PRECEPTORS OBTAINED MOST FAVORABLE, LEAST FAVORABLE AND OTHER C-SCORES IN TERMS OF SUPERVISORY PROMISE

Preceptor Number	C-SCORES Number of Most Favorable	Number of Least Favorable	Other
P 28 A	6	0	4
P 34 A	5	1	3
P 43 A	5	1	4
P 44 A	6	1	2
P 60 A	4	4	2
P 85 A	3	0	1
P 88 A	5	1	3
P 23 A-B	6	1	3
P 32 A-B	6	1	3
P 38 A-B	7	1	2
P 3 B	4	2	4
P 12 B	6	0	4
P 13 B	8	0	2
P 14 B	3	2	3
P 20 B	2	1	6
P 24 B	8	0	2
P 59 B	6	1	3
P 64 B	6	1	3
P 68 B	6	0	3
P 79 B	6	1	3
P 1 C	4	4	1
P 18 C	6	2	1
P 26 C	4	1	5
P 37 C	5	1	4
P 50 C	3	3	3
P 52 C	7	1	2
P 53 C	6	2	1
P 54 C	4	1	5
P 66 C	4	3	2
P 73 C	4	0	5
P 55 C-D	6	0	4
P 69 C-D	7	1	2
P 71 C-D	4	2	3
P 72 C-D	4	3	3
P 83 C-D	2	5	3
P 10 D	4	2	4

TABLE 17: NUMBER OF PRECEPTORS IN EACH GROUP WHO SCORE MOST FAVORABLY AND LEAST FAVORABLY IN TERMS OF SUPERVISORY PROMISE ON EACH OF THE TEN TRAITS

Trait	Group	Number Who Score Most Favorably	Number Who Score Least Favorably
General Activity	A-B	11	1
	C-D	4	1
Restraint	A-B	11	1
	C-D	9	0
Ascendance	A-B	6	5
	C-D	2	5
Sociability	A-B	9	
	C-D	10	
Emotional Stability	A-B	17	1
	C-D	12	1
Objectivity	A-B	12	1
	C-D	8	3
Friendliness	A-B	14	2
	C-D	9	3
Thoughtfulness	A-B	12	4
	C-D	9	4
Personal Relations	A-B	11	1
	C-D	8	6
Masculinity	A-B	6	6
	C-D	7	7

In terms of supervisory promise, more preceptors in group A-B score favorably on most traits (eight of ten) but the difference proved to be statistically significant on only one trait. Yet there is a significant difference in the pattern of each group's C-score distribution in terms of supervisory promise. The lack of difference may be due to many factors. The differences between men tend to cancel each other out as a group; influences other than temperament may dominate; temperament may have effects that our A-B or C-D criteria are not well designed to reveal; we may not have in fact separated the "superior" from the "non-superior" men.

CHAPTER IV: THE INSTRUCTIONAL SETTING OF THE PRECEPTOR

Because the instructional environment and resources, the pharmacy itself, may influence the quality of the preceptorship, a study was made of the pharmacies in which the preceptors worked at the time they trained the interns in our sample. In examining the findings below, it must be kept in mind that only one observer evaluated these pharmacies; hence some objectivity or bias in matters of judgment can be expected, although constant effort was made to minimize it.

TYPE OF PHARMACY

To relate preceptors rated superior and not-superior to the type of pharmacy in which each category conducted the practical training, an appropriate system of classifying pharmacies was devised (see table 18, p. 70). This permits us to convey a rather concrete impression of the teaching environment of the preceptors (including the style, size and character of their pharmacies). The small size of the sample, however (41 pharmacies), prevents any serious attempt to determine a general tendency or pattern of differences among preceptors rated superior and less-than-superior.

Table 18, p. 70 does contain some hint of validity for our hypothesis that the proportion of hospital-preceptors in the group rated superior would be larger than in the not-superior group. The majority of interns who work in hospital pharmacies tend to rate their preceptor higher than "C,"

TABLE 18: TYPE OF PHARMACY[a] IN RELATION TO PRECEPTOR'S MEDIAN RATING

Type of Pharmacy	Number of Preceptors in Each Type A-B	C-D
Independent		
Separate Community Pharmacy	6	4
Clinic	1	
Medical Building	1	1
Shopping Center	1	1
Chain		
Separate Community Pharmacy	3	4
Clinic	2	
Shopping Center	3	6
Hospital		
100 to 300 beds	4	2
301 to 500 beds	2	
TOTAL	23	18

a. Separate community pharmacies are considered to be those that are established in the city or town proper and that are part of a single commercial establishment (as opposed to a shopping center). An independent pharmacy is regarded as one operated by a single pharmacist or a partnership, and not more than two pharmacies are operated by the same owners (as opposed to a chain pharmacy, considered to consist of three or more). A clinic pharmacy operates in a building where medical practitioners work in conjunction with one another, share the same facilities, technical or professional help, and share income and expenses as a corporation. A pharmacy in a medical building is looked upon as one serving many units operated independently by practitioners with offices in the same building. A shopping center pharmacy is part of a group of stores, usually with separate managements, within a single shopping complex. Hospital pharmacies are classified into three groups according to the number of beds served by the pharmacy: Group A with 100 to 300 beds, Group B with 301 to 500 beds, and Group C with 501 beds or over. [Adopted from a report by Lourdes Santies and Kathleen Cultar, "How Hospitals Implement Menu Systems," Hospitals, 38, No. 10 (May 16, 1964), 93-96, 140].

while the median self-rating of all hospital pharmacists in the sample is "B." This merits further study when a larger sample is available, especially since the earlier findings of William Sharp showed that trainees who served their internship in hospital pharmacies rated responses to his questions significantly higher than did the total group of trainee-respondents.[1]

"Should it be required that part of every internship be served in a fairly large hospital pharmacy?" The interns' and preceptors' replies to this question include some interesting results. Most interns and preceptors who served in community pharmacies do not feel that hospital pharmacy experience would offer an advantage. This response may be partly conditioned by the circumstance that virtually all had no experience in hospital pharmacy. In contrast, when interns and preceptors who work in hospital pharmacies are asked this question, about one-half of the preceptors and one-half of the interns say yes, the others say no. Thus, though hospital pharmacy interns generally rate their preceptors high, 11 here consulted reveal no clear consensus that hospital pharmacy experience should be required of all interns. This may imply that the interns feel that the preceptor is the most vital part of the internship program -- not the pharmacy in which it is served.

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1. Sharp, Pharmacy Trainee Program, p. 30.

Sales Volume

The preceptors were asked to indicate their approximate sales volume on a check list provided (see Appendix A, p. 148). The majority of preceptors in group A-B (11 of 16) work in pharmacies with a sales volume over $200,000, whereas half of the 16 preceptors in group C-D work in pharmacies with sales volumes over $200,000. Chain pharmacies in the community and in shopping centers, as we would expect, are the ones that most frequently have total sales volumes over $150,000. However interesting may be a comparison of the interns' ratings of preceptors in relation to the volume of the pharmacies where preceptorship was conducted, the small size of the sample does not permit us to infer any general tendency from data such as table 19 (p. 73). A larger sales volume may affect the intern in two ways. First, regardless of the number of employees, the preceptor may have more responsibilities and more to do, consequently having less time to spend with his intern. Second, the intern may have an opportunity to gain experience in more phases of a general or diverse type of pharmacy operation, since the majority of the community pharmacies in the sample with sales volumes over $150,000 are chain units that stock a wide variety of merchandise. This is not necessarily an unmixed blessing, as some of the interns implied who indicate that they were often required to spend a greater percentage of their time working "out front," rather than behind the

TABLE 19: DISTRIBUTION OF PRECEPTORS, IN RELATION TO SALES VOLUME OF TEACHING PHARMACIES[a]

Annual Sales Volume	Number of Preceptors in Each Class A-B	C-D
$ 80,000-$100,000	1	0
$100,000-$125,000	1	2
$125,000-$150,000	2	3
$150,000-$200,000	1	3
Over $200,000	11	8
TOTAL	16	16

a. Data are not listed for eight hospital pharmacists and one community pharmacist who said they did not know.

prescription counter. To put the advantages of a large sales volume to their best use for the intern requires the sagacious judgment of a considerate preceptor.

The majority of the preceptors function in the large-volume establishments (over $150,000), and about half of this group are rated superior. Hence, the interns' reaction to their internship probably depends more upon the practitioners under whom they train than upon the size of the operation, as we would expect. Any effect on the preceptorship arising from differences in sales volume alone would not be easy to demonstrate, but at least it should be said that there is no evidence yet that interns have a better chance of finding superior preceptorship in smaller operations. Perhaps more promising for further investigation would be the question of the effect of differences in type of pharmacy utilized.

Daily Prescription Volume

The volume of prescriptions that a pharmacy fills is considered so important to internship that a statement of the minimum number a preceptorial pharmacy must fill (about 20 per day) is written into the regulations.

Table 20, p. 75 shows the daily new prescriptions filled by pharmacies of superior and not-superior preceptors. The hospital pharmacies fill the largest number of prescriptions (including orders that come down from the floors). In the community pharmacies, the most common daily

TABLE 20: DAILY NEW PRESCRIPTIONS, IN RELATION TO PRECEPTOR'S MEDIAN RATING

New Prescriptions Per Day	Number of Preceptors in Each Class A-B	C-D
10-20	1	2
20-30	0	2
30-40	9	5
40-50	2	1
50-60	0	3
60-70	2	1
70-80	1	1
80-90	1	0
90-100	2	1
100-200	3*	0
200-300	2*	0
Over 400	0	2*
TOTAL	23	18

* Volume of new prescriptions per day of hospital pharmacies, including orders which come down from the floors.

TABLE 21: NUMBER OF PHARMACISTS IN RELATION TO PRECEPTOR'S MEDIAN RATING

Number of Pharmacists Per Pharmacy	Number of Preceptors in Each Class A-B	C-D
1	2	1
2	4	5
3	10	5
4	6	5
5	1	1
8	0	1
TOTAL	23	18

volume is between 30 and 40 new prescriptions. Three-quarters of the pharmacies in this group are independent and chain stores in shopping centers. Over half of the pharmacies in the sample fill less than 60 new prescriptions per day.

While we would not expect superiority of preceptorship to depend upon prescription volume alone, any tendency related to this characteristic cannot be demonstrated with the size of sample available for the present study. It does show, however, that most of the preceptorial pharmacies operate well above the established minimum volume of prescription practice, that there is a wide range in the volume of prescription practice available for training purposes, and that the hospital pharmacies operate at a considerably higher level of activity per unit than the community pharmacies do. Naturally, the quality of instruction on a few selected prescriptions may be more productive than on a large number involving repetitious and simple operations; yet, ordinarily a larger volume of prescription practice is likely to offer a greater variety of experiences, both mental and manual, and of unusual features of prescribing.

Number of Pharmacists Per Unit

The more fellow-pharmacists an intern works with, the greater is the likelihood that he will gain from their diverse experiences, and find someone with whom he can identify professionally, even if it is not his preceptor. Both aspects

are important to the intern. Table 21, p. 75 shows that most pharmacies have either three or four pharmacists, thus having more professional staff than the typical Wisconsin pharmacy.[2] Hospital and shopping-center pharmacies in the sample generally have the larger number of full-time pharmacists. As we would expect, the preceptors rated superior and not-superior appear to be distributed at random in professional staffs of various size. The distribution suggests that no correlation exists between the types of pharmacies and the number of pharmacists employed in them, although that cannot be statistically validated with the type of sample available. The number of pharmacists per pharmacy in relation to interns' and preceptors' ratings of time devoted to intern's training needs was discussed in Chapter II, p. 40.

TYPE OF OWNERSHIP

The type of pharmacy ownership could affect an internship indirectly. A preceptor who owns his own pharmacy or who is in partnership may have more independent control over operating policy and may be better able to conduct the intern's training wholly in the manner he desires. On the other hand, his additional administrative functions and responsibilities might diminish the amount of time he can spend with his intern.

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2. In Wisconsin, pharmacies most commonly (517 out of 1092) employ only one pharmacist, Proceedings, National Association of Boards of Pharmacy (1964), 113.

When preceptors are classified according to the type of pharmacy ownership, it is found that nine of 23 superior-rated preceptors own their own pharmacies in whole or in part. Three of the four preceptors rated as "A" are the sole proprietors of their pharmacies. Only four of the 18 preceptors in group C-D own the pharmacies in whole or in part, while seven work in pharmacies that are owned by absentee pharmacists. Though the numbers are small (see table 22, p. 79), they raise a question whether or not circumstances of independent ownership increase the chance for a preceptorship that interns consider superior. This should eventually receive further study with elaborated test methods and a larger sample. A motivation detected in the present group and explicitly expressed by four owners during interviews, is a desire to interest the intern to stay on after he completes his internship and becomes a licensed pharmacist.

APPEARANCE OF THE PHARMACY EXTERIOR

Since the preceptorship often provides a model of behavior and lays down habit patterns for the conduct of practice at an impressionable time for the neophyte, it appears of some consequence to a profession's dignity and standing what standards of appearance and maintenance are enforced in the teaching pharmacies. Information about the physical character of the preceptor's "classroom" hence has

TABLE 22: TYPE OF PHARMACY OWNERSHIP, IN RELATION TO PRECEPTOR'S MEDIAN RATING

Type of Ownership	Number of Preceptors in Each Type A	A-B	B	C	C-D	D
Preceptor owns in whole or part[a]	4	1	4	3		1
Principally absentee ownership[b]	1		2	5	2	
Owned by hospital, public or private institution	2	2	2	2		
Owned principally by physicians[c]			1	1		
Owned by pharmacist(s) other than preceptor		1	3	1	3	
TOTAL	7	4	12	12	5	1

a. Of the 13 preceptors in this group, five own a pharmacy themselves, eight own it in partnership with one or more other pharmacists.

b. In all cases the absentee-owners are pharmacists.

c. In both cases the location of the physicians' offices was not divulged.

some relevance to our theme. To avoid bias, a pharmacy's appearance was judged without knowing whether a preceptor rated superior or not-superior worked in it.

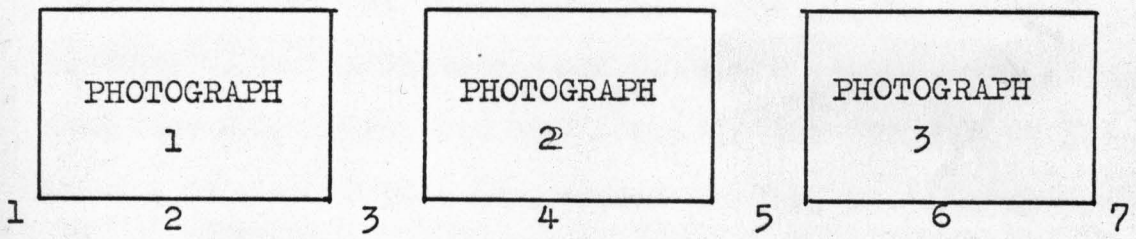
Rating on a Pictorial Scale

The appearance of pharmacies in which young graduates are learning to put their profession into practice surely is not irrelevant to the preceptorship as a teaching function. So we are curious about what sort of establishments serve Wisconsin's internship program. Even though I have visited nearly all teaching pharmacies in our sample, for one or two hours, there is no entirely satisfactory, practicable way to convey concrete impressions. One device used to stabilize standards of observation and reportorial method is a pictorial scale of photographs of pharmacies, selected to provide a qualitative range of appearance. (For photographs, see Appendix D, p. 170.) Differences in size and architecture were disregarded as much as possible, to focus the rating on such features as the condition and orderliness, appearance of advertising and display windows, and the character of the main identifying features (including identifying signs).

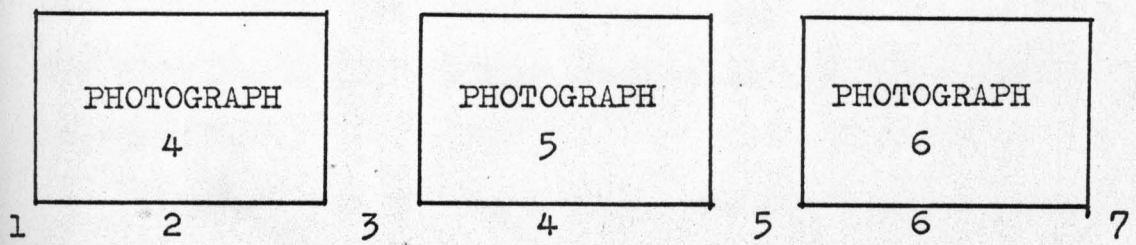
The seven-point scale along which the pharmacies are ranged (in relation to the photographs) is shown on page 81. For purposes of discussion, 1 is considered as low, 7 as high (without intending judgment of merit as service units). The six photographs for this study were chosen to

DIAGRAM 1:: SEVEN-POINT RATING SCALE USED WITH SIX PHOTOGRAPHS OF PHARMACY EXTERIORS AND INTERIORS

Exterior Photographs



Interior Photographs



provide the widest spread between a pharmacy with a clearly professional atmosphere, and one with a clearly commercial atmosphere. Photograph 2 is not meant to represent a midpoint between the pharmacies in Photograph 1 and Photograph 3.

In relation to the photographs, half of the pharmacies correspond best to the numerical value 4 (see table 23, p. 83). About three-quarters of these ratings are drawn from the C-D group, and particularly the pharmacies located in shopping centers. Pharmacies serving an "A-B" preceptorship are categorized mainly between 4 and 7, as 13 of 17 pharmacies received ratings of 4 or higher. An exception to this trend for higher-rated preceptorial pharmacies in the A-B group was in the rating of two stores operated by the same chain. Both had such cluttered windows, replete with signs and dusty merchandise, that they were ranked at 2 on the continuum. All clinic pharmacies were assigned to category 6.

Three-fifths of the ratings between 1 and 4 inclusively were assigned to pharmacies in group C-D, where only one establishment received a rating higher than 4. Chain pharmacies, located in shopping centers or elsewhere in the community, were the ones most often placed in categories below 4.

Thus, more pharmacies in group A-B are categorized toward the end of the continuum representing "professional" appearance. A greater proportion (5 of 16) of pharmacies

TABLE 23: APPEARANCE OF A PHARMACY'S EXTERIOR ON A SEVEN-POINT PICTORIAL SCALE, IN RELATION TO THE NUMBER OF PHARMACIES SERVING PRECEPTORS RATED AS SUPERIOR AND NOT-SUPERIOR

Scale Numbers	Number of Pharmacies Serving Preceptors Rated: A-B	C-D
1	0	0
2	2	0
3	2	5
4	6	10
5	2	1
6	3	0
7	2	0
TOTAL	17	16

in group C-D tend to fall toward the end of the continuum representing "commercialized" appearance, than "professional" appearance (1 of 16). This finding tends to suggest that preceptors rated as superior are more likely to be serving in pharmacies with a professional atmosphere, and this indicates a possibility that a pharmacy's orientation, the preceptorial setting, may be the tangible evidence of a professional spirit that influences the impression of interns, or perhaps even the setting itself can be influential.

Identifying Sign

The manner in which the establishment is designated by its main identifying sign varies considerably. Most signs are in good condition and in good taste, though a few could reasonably be called gaudy. Such detractions are found almost equally often, however, at sites of preceptors rated superior and not-superior. Three-quarters of the pharmacies that have signs that were considered gaudy or in poor taste are independent community pharmacies and chain stores, particularly in shopping centers. Pharmacy-identification signs that are part of an advertising sign (such as Coca-Cola) are most frequently found on independent community pharmacies.

Window Displays

The majority of the pharmacies in the sample (21 of 33) have window displays that were judged to be totally

commercial (see table 24, p. 86). Fourteen of these 21 are pharmacies in group C-D. Three of the four pharmacies with mixed professional and commercial displays are pharmacies serving an "A-B" preceptorship. Only two pharmacies have displays that were considered to be totally professional,[3] and both of these belong to preceptors in group A-B. One is an independent community pharmacy; the other is an independent pharmacy in a medical building. Of the six pharmacies with no window displays (open front), five serve an "A-B" preceptorship and three of these are clinic pharmacies. No pharmacy in the sample bears any imprecise reference to competitors or to itself in the windows or anywhere on the pharmacy's exterior.

Appearance of Advertising

Of the six pharmacies that have no proprietary drug advertising signs in their windows, all serve an "A-B" preceptorship and three have no window displays at all (see table 25, p. 86). For establishments with one or two proprietary drug signs in their windows, the number is split almost equally between the sites of preceptors rated

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3. The extent to which an establishment's window display was judged to be professional or commercial depended on the "message" the pharmacist was trying to convey by his display. Professional displays included those that educated the public in the functions of a pharmacist, advances in pharmacy, benefits of research, health care, etc. Commercial displays were those whose purpose was to promote the sale of drugs, health related and non-related items.

TABLE 24: APPEARANCE OF PHARMACY'S WINDOW DISPLAYS, IN RELATION TO THE NUMBER OF PHARMACIES SERVING PRECEPTORS RATED AS SUPERIOR AND NOT-SUPERIOR

Type of Window Display	Number of Pharmacies Serving Preceptors Rated: A-B	C-D
Totally commercial	7	14
Mixed professional and commercial	3	1
Totally professional	2	0
None	5	1
TOTAL	17	16

TABLE 25: NUMBER OF PROPRIETARY DRUG ADVERTISING SIGNS IN WINDOW DISPLAYS, IN RELATION TO THE NUMBER OF PHARMACIES SERVING PRECEPTORS RATED AS SUPERIOR AND NOT-SUPERIOR

Number of Signs	Number of Pharmacies Serving Preceptors Rated: A-B	C-D
None	6	0
1-2	5	6
3 or more	6	10
TOTAL	17	16

superior and not-superior. More stores serving preceptors in group C-D have three or more proprietary drug advertising signs than in group A-B, and once again, chain stores, particularly in shopping centers, are predominant in this group. Thus, as would be expected from the distribution of the pharmacies along the continuum provided by the photographs, professionally-oriented pharmacies tend to have less commercialized window displays and make use of fewer commercial signs.

Perhaps attention should be called to one variable of appearance. These pharmacies were visited between December and February. Since Christmas and January sales are common features of many pharmacies, particularly chain stores, this may have contributed to an atypical appearance in many instances, which could not be assessed. However many of the establishments having such sales also hold frequent sales throughout the year, and their appearance thus would not be widely deviant from their normal one.

APPEARANCE OF THE PHARMACY INTERIOR

Rating on a Pictorial Scale

Virtually the same pattern observed in the ranking of the pharmacies according to exterior appearances was obtained in similar observations of the pharmacy interiors (see table 26, p. 88). It was noted, with few exceptions, that the exterior reflects the mood of the interior. Some

TABLE 26: APPEARANCE OF PHARMACY'S INTERIOR ON A SEVEN-POINT PICTORIAL SCALE, IN RELATION TO THE NUMBER OF PHARMACIES SERVING PRECEPTORS RATED AS SUPERIOR AND NOT-SUPERIOR

Scale Numbers (in ascending order of level of appearance, see p. 81)	Number of Pharmacies Serving Preceptors Rated: A-B	C-D
1	2	0
2	1	3
3	0	2
4	4	8
5	5	3
6	3	0
7	2	0
TOTAL	17	16

pharmacies were rated one unit further toward the commercial end of the scale, particularly independent community establishments that attempt to crowd a variety of merchandise into a small area (producing a more heterogeneous and less dignified appearance), most resembling Photograph 1.

As before, more preceptors rated as superior by their interns work in pharmacies considered as professionally oriented than in pharmacies that appeared highly commercial. Preceptors in group C-D more commonly work in pharmacies whose appearance suggested a commercial orientation (the relation of this pattern to other findings is discussed below under "General Remarks.")

The Pharmacy's Front Area

The "front end" of a pharmacy is commonly regarded as what the patron sees, exclusive of the prescription dispensing area. In most cases, it occupies a large proportion of the area and provides the greatest part of the income. The nature and extent of the pharmacy's front end operation will be a major factor in determining the character of the training an intern receives in this area, as required by State Board regulations.

In the sample studied, only two clinic pharmacies and two pharmacies in medical buildings do not deal in merchandise other than prescriptions and products related to health and beauty needs.

In the majority (over three-quarters) of pharmacies serving preceptors in the A-B group, departmentalization was considered to be excellent, as merchandise is neatly shelved, well-grouped and readily located. (Exceptions were a couple of independent community pharmacies and the two chain stores mentioned on page 82, in which the extent and layout of the merchandise gave the observer a feeling that could be termed oppressive.)

Pharmacies serving group C-D were likewise considered well-departmentalized, and many chain stores are superior in this regard.

Cleanliness throughout most of the pharmacies was considered to be quite good, with the exception of one particularly ill-kept independent community pharmacy serving in group A-B.

The majority of the community pharmacies serving both A-B and C-D groups (24 of 33) place products for medicinal use within reach of patrons. The proportion in both groups is the same. In most cases (particularly in chain stores), such products are close to the prescription dispensing area under the close supervision of the pharmacist, where professional attention could be given to the patron when making a selection.

The area of the pharmacy devoted to the compounding and dispensing of prescription, over-the-counter drugs and first-aid supplies generally occupies 20 to 30% of the total area. Only six pharmacies, all in group A-B, devote

40% or more of their floor area to these departments, with clinic pharmacies and pharmacies in medical buildings having the highest proportion. In 90% of the pharmacies in shopping centers, the proportion is relatively low, but these departments are nevertheless considerable in size and variety, being about 20%. The proportion is naturally lower in these pharmacies that are considerably larger over-all than most independent community pharmacies serving clinics or medical buildings.

Nineteen of the pharmacies in the sample have advertising of non-pharmaceutical products as the main type of advertising in the establishment. Most of this promotional material does not seriously detract from the store's appearance, as it is generally small in extent. The majority of the pharmacies serving group A-B have a commendable appearance, with respect to visible promotional material, particularly the pharmacies in clinic and medical buildings. On the other hand, in this A-B group are three of the pharmacies that have promotional material judged to be out of keeping with a teaching pharmacy; and two of these pharmacies were judged as having the most offensive advertising examined. One of these establishments, a chain pharmacy in the community, had signs too numerous to count suspended from the ceiling, which promote discounted vitamins. The other pharmacy, operated by the same chain in a shopping center, has signs along the wall and hanging from the ceiling proclaiming "It's the Price that Counts,"

"Compare Prices, Not Claims," and "Low, Low Prices Every Day." Such signs are considered both somewhat misleading and out of character with a superior teaching pharmacy. In pharmacies serving the C-D group, signs promoting sales and non-drug items are more common, and one pharmacy operated in a shopping center has a sign whose merit is questionable. It reads: "Save Time - Save Money, Prescriptions Filled at .... Stores May Be Refilled at Any of Our Convenient Locations." When four persons not associated with pharmacy were asked how they interpret such a sign, three implied that they would expect a special service from these pharmacies which they could not obtain elsewhere.[4]

Four superior-rated preceptors work in pharmacies that offer special services, such as truss-fitting and the sale of surgical and orthopedic garments or services. Two of these also offer supplies to physicians and one operates a hearing-aid center. Two of these pharmacies regularly put out health information pamphlets for the public. No preceptor in the group rated less-than-superior works in pharmacies where special services are offered, except one pharmacy that displays free health pamphlets for the public's benefit.

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4. Two thought their prescriptions would be lower in price at these pharmacies, and one thought he could get his prescriptions refilled without the doctor's approval. One person saw nothing misleading in the sign.

The Prescription Dispensing Area

For purposes of teaching the intern, the controlled internship program places emphasis on what goes on in the prescription dispensing area. Interns look forward to spending as much time as possible there, and it embodies the main part of the work for which they have spent five years preparing.

The majority (19 of 33) of the pharmacies serving both A-B and C-D groups have the dispensing counter toward the back of the pharmacy, and most are arranged so that the patron could observe only partially the pharmacist's prescription work. In all except eight establishments, the pharmacist could look over the entire front of the pharmacy. Groups A-B and C-D have almost equal numbers of pharmacies with the prescription dispensing area in the several locations: in the front, back, or middle, and likewise with comparable distribution of fully-visible, semi-visible, or closed types of construction.

A greater proportion of pharmacies serving group "A-B" preceptors devote the front of the area designated for prescription service to the sale or promotion of health-related items than do those serving group C-D. More pharmacies serving group C-D devote between 10 and 100% of this area to the display of merchandise unrelated to health needs (with the majority in the 10 to 40% range). Products such as writing and photographic supplies are frequently

displayed alongside over-the-counter preparations.

Thirty-five of the 41 pharmacies differentiate their pharmacists from the unlicenced staff by means of a tag worn on their clothes and/or a distinctive uniform. One preceptor mentioned that he would not allow his interns to wear a dispensing coat until the intern had completed his university education and six months of his internship. Of the six pharmacies where pharmacists are not differentiated by distinctive uniforms, four are serving superior-rated preceptors (but in two of these, pharmacists are the only persons employed).

A greater number of pharmacies serving group A-B (14 of 23 as opposed to 5 of 18 serving group C-D) have an office or desk-nook where private conversations could be held with professional men or laymen. In these pharmacies, including seven of the eight hospital pharmacies, discussions with interns away from interruptions by clientele could more easily be arranged.

The Pharmacy's Library

There has been a great deal of discussion in the past few years about the changing role of the pharmacist, particularly toward a greater responsibility in an important area -- that of pharmaceutical consultant to the medical practitioners, and also to patrons, in fields of his expertness. The preceptor therefore could be expected to have an above-average collection of good books and journals,

both for his own use and for purposes of training the intern.

With this in mind, the library in the preceptors' pharmacies was studied to characterize the nature and extent of their literature resources. (For check-list used, see Appendix A, p. 153).

Reference Books and Professional Volumes. In checking the preceptor's library, reference books and professional volumes required by State Board regulations were ignored, as it was assumed that all pharmacies would have these. (It may be noted, however, that two chain stores that did not have on the premises some of the books required by the State Board reported that the missing books were shared with other units in the chain.)

The check-list used for surveying the literature collections was based upon books recommended in "The Pharmacist's Reference Shelf."[5] All books that the preceptor has or indicated he has were listed. The relative percentage of pharmacists in both A-B and C-D groups who have each of the books listed is shown in table 27, p. 96. It is obvious that there are many books that both superior and less-than-superior- rated preceptors keep in their pharmacies.

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5. See Dolores Nemec, "The Pharmacist's Reference Shelf," Bulletin, School of Pharmacy, The University of Wisconsin, University Extension Division (Summer 1962-1963), 20. This is based on Lawrence E. Newman, "These Books Form the Nucleus of a Useful Reference Library," American Professional Pharmacist, 27, No. 3 (March 1961), 46-51.

TABLE 27: PERCENTAGE OF PRECEPTORS IN EACH GROUP WHO SHELVE THE BOOKS LISTED

Group A-B	Book	Group C-D
74%	Physician's Desk Reference	78%
65	Merck Index	50
48	Remington's Practice of Pharmacy	67
39	Modern Drug Encyclopedia	67
35	Merck Manual	17
22	New and Nonofficial Drugs	22
13	The Pharmacological Basis of Therapeutics (Goodman-Gilman)	--
9	Blakiston's New Gould Medical Dictionary	--
4	A laboratory procedure book	--
4	Pharmaceutical Dispensing (Husa)	--
4	Norms of Conduct for Pharmacists	--
4	American Pharmacy (Lyman)	--
4	History of Pharmacy (Kremers and Urdang)	--
4	American Drug Index	--
4	Mirror to Hospital Pharmacy	--
--	A toxicology volume	6
--	Clinical Toxicology of Commercial Products (Gleason)	6

Most of these are books that give basic information on drug properties. However, the superior-rated group does tend to have more books dealing with other aspects of pharmacy. However, these numbers are so small, in most cases only one pharmacist having one of these books, that the difference is not marked.

This seems to suggest that preceptors are either able to get along quite well on the books they do have, or do not think it worth the money to buy additional ones. The small number of books on toxicology and ethics does suggest that many pharmacies must be lacking in certain areas, as information on these subjects is not generally or conveniently found in the books most pharmacies shelve.

Preceptors in both groups have the same median number (six) of professionally relevant volumes on their shelves, exclusive of the books required by State Board regulations. One hospital pharmacy in the sample has at least 40 professionally relevant volumes on its shelf, one community pharmacy has 20, but this is the exception rather than the rule. Ten pharmacies, in clinics, medical buildings and hospitals, have access to medical libraries in the building. These findings fail to support the hypothesis that pharmacists who maintain quantitatively superior literature resources are more likely to have qualities that former interns rate as superior preceptorship.

Journals. Table 28, p. 98 shows the distribution of the journals among the two classes of preceptors. Though

TABLE 28: PERCENTAGE OF PRECEPTORS IN EACH GROUP RECEIVING, SCANNING AND SAVING[a] THE JOURNALS LISTED

Group A–B				Group C–D		
Receiving	Scanning	Saving	Journal	Receiving	Scanning	Saving
92%	57%	39%	Wisconsin Pharmacist	88%	39%	39%
78	57	43	Journal of A.Ph.A.	67	39	28
65	43	35	Drug Topics	67	56	50
43	26	22	American Druggist	61	50	45
39	30	17	American Professional Pharmacist	61	28	39
30	22	17	NARD Journal	33	17	22
30	22	17	*Chain Store Age	22	17	17
26	17	22	American Journal of Hospital Pharmacy	11	11	11
9	—	—	Central Pharmaceutical Journal	28	17	22
9	4	4	*International Pharmaceutical Abstracts	—	—	—
9	4	9	*J.A.M.A.	—	—	—
9	9	9	*Hospitals	—	—	—
4	—	4	*Drug and Cosmetic Industry	6	—	—
4	—	4	*Northwestern Druggist	6	—	6
4	4	—	*Postgraduate Medicine	—	—	—
4	4	—	*Clinical Pharmacology	—	—	—
4	4	4	*Drug News Weekly	6	—	—
4	—	4	*Hospital Management	—	—	—
4	4	—	Surgical Business	—	—	—
4	4	—	R.N.	—	—	—
4	4	—	R.I.S.S.	—	—	—
4	4	4	Medical Economics	—	—	—
4	4	—	*Drug Trade News	—	—	—
—	—	—	*Antibiotic News	6	6	6
—	—	—	*Science	6	6	6

a. Saved for period of at least one year.

* Journals received by paid subscription (other than through a society membership). Business Publication Rate and Data, a monthly publication of Standard Rate and Data Service, Inc. was used to determine where possible whether the journals were paid for.

the numbers are small, it is readily seen that superior-rated preceptors do receive more journals than preceptors rated less-than-superior. What is of greater significance is the fact that group A-B preceptors receive more journals requiring a paid subscription than do preceptors in group C-D, who rely more on free-circulation periodicals. When pharmacists pay for journal subscriptions, it would seem to indicate a greater interest in keeping abreast of the literature.

Considering the journals received by both groups, there are no remarkable differences in the number of preceptors who scan each journal, nor in the number who save them for a period of at least one year, although table 28 shows some additional attention to the literature by the group rated superior. No pharmacy studied used any system to file the journals or references or clippings from them. They are simply stored together or mixed with other books on the shelf.

Product and Professional Information. About one-half of the preceptors in each group keep a file of new-product literature, ranging in volume from three to six linear feet, and on the average about three linear feet. Only two pharmacies have files of other professional information and literature references. Both of the preceptors concerned are in group A-B and one of them is the only preceptor in our sample who has a real system of encouraging the intern

to use professional literature. This preceptor takes material from his file each week and gives it to the intern to look over, then return it for discussion. The large majority of preceptors feel that a file of product information is too difficult to keep up and that all the information they need could be obtained from their books and from manufacturers' circulars, which accompany the drug itself.

GENERAL COMMENTS

The attempt to survey and depict certain facets of the physical character and resources of teaching pharmacies provides a more concrete impression than hitherto available of the environment in which Wisconsin preceptors function. This may permit inferences about what can be expected from the program at the present stage -- inherent limitations as well as potential -- even though the influence, or even the more general validity of some interesting findings cannot be statistically validated until more pharmacies meeting conditions of the sample are available for study.

One interesting finding, for example, is an apparent tendency for a superior-rated preceptorship to be achieved more often by owners than by non-owners.

In physical appearance, most pharmacies tend to have a mixed professional-commercial atmosphere, but more preceptors in group A-B work in pharmacies that are judged to

be professionally-oriented. However, even in this group, there are a couple of exceptions. Two of the pharmacies that looked most highly commercial were served by preceptors in the A-B group. Preceptors who achieve a superior rating do tend (more often than others in our sample) to be found in pharmacies disposed toward more professional-looking display windows, more professional-looking promotional material inside, more professional use of the face of their prescription department, more professional services and supporting resources, and better facilities for professional consultation.

One of the consistent patterns observed lies in the character of the preceptors' libraries. Superior-rated preceptors, on the average, shelve more reference books, read more journals from allied fields, and in more instances maintain reference files of professional information than do the preceptors in group C-D. The important element here is not the library itself, but what it may indicate about the preceptor.

When all the factors in this segment of the study are taken into consideration the findings suggest tentatively denying the hypothesis that the rating of a group of pharmacists as superior preceptors has no discernible relationship to physical and administrative characteristics of the preceptorial setting. Superior-rated preceptors do tend to work in pharmacies that have characteristics that

differentiate them from preceptors rated less-than-superior by their former interns. Future research throwing further light on this question could be of significance to pharmacy, through its effort to improve further the methods of moulding recruits to the profession.

CHAPTER V: ATTITUDES TOWARD VARIOUS ASPECTS OF THE PRECEPTORSHIP

His Role as a Practical Teacher

Basically, the preceptor functions as a teacher. Presumably the controlled internship was developed to maximize learning in important aspects of being what we mean by a "good pharmacist," which cannot be adequately simulated and inculcated in the classroom.

Approximately three-quarters of the preceptors in the sample feel that their role as a practical teacher is mainly a supervisory role, that their interns learn mainly by doing. Some preceptors rely on the example they themselves set to show the intern how to deal with such matters as compounding, customer relations and selling techniques. The most resourceful preceptors do go further. Asked how he taught interns, one replied: "By example, but I have done another thing. Each week, I prepared a manila folder on readings I myself have done. This contains interesting articles on the Red Cross, City Council, drug news, etc. The intern is given such a folder each week and is left to do what he wants with it. He just initials the material and gives it back." Comments by this preceptor's interns indicate that they found this to be highly helpful.

Ten of 40 preceptors said that they do not have the time necessary to teach their interns explicitly. As one

preceptor indicated, "If you had the chance to stand on top of him [the intern] and watch all that he does, that would be one thing. All I can do is have him bring the prescription he has filled to me to check and give instructions on how to write up the directions. We're checkers more than anything else."

Although many preceptors regard their teaching function as mainly supervisory, other comments during the interviews often indicated that they readily supplement their supervision with instructive action. "We've always been on the alert. Whenever we get any prescription that is different, or puzzling -- a 'good compounder' as we called them -- we would turn it over to the intern, things like possible overdose or an incompatibility. Whenever we see an interesting article, we see that the intern gets it. When a problem comes up, we ask the intern what he would do in such a case." Such comments indicate that preceptors do keep a watchful eye out for items of practical importance for their interns. One hospital pharmacy preceptor expressed a policy that probably is not unusual in our sample when he said that he closely supervises his intern, then gradually gives the intern more responsibility as he progresses. "In the first year they come with us, we let them make some of our stock solutions after the bulk of the morning work load is done. When we feel they are capable, they are assigned that job. They help with the filling of baskets of medication in the morning. As they become

familiar with it, we allow them eventually to fill a basket on their own. By the time they are licensed, they are already doing a pharmacist's work." This gradual lessening of supervision, though not encouraged by the State Board, was mentioned by several other preceptors. A few of the former interns recall a lack of supervision in filling prescriptions to a degree that they believe not desirable.

Among preceptorial qualities or effective teachings that former interns mention most frequently are: the preceptor's interest, his ethics, encouragement to read, teaching of application of laws, and the business aspects of operating a pharmacy. Individually, interns mention many other commendable features of the preceptorship they had experienced: such as honest and conscientious in practices, willing to sacrifice, highly professional, critical, quizzing, effective teaching of time-saving methods.

The following examples of comments on the preceptor's quizzing and criticizing of the intern are by interns who rated their preceptor as superior:

> My preceptor constantly quizzed me as to who makes what and what it's used for. We daily discussed how to handle customers, doctors, our wives, and any one else who came in the store. He taught me to read a newspaper daily so that I could talk to people about what is going on in the world.
>
> [He] insisted for the first six months that each prescription be cross-checked by him or a senior pharmacist. Thus,

extra time assured accuracy and at the same time precipitated discussions on many pharmacy problems.

Nine interns who rated their preceptors in group C-D said, perhaps due to bitter feelings, that their preceptor has no qualities as a teacher or is a poor teacher.

Preceptors seem to have a rather limited view of their role as a practical teacher, restricted in most cases to supervising the intern's work. However, it appears that many preceptors imply a great deal more in the term "supervisory" than is apparent at first blush. Particularly among superior-rated preceptors, the supervisory role is supplemented by extra guidance that carries the task far beyond mere supervision. If supervision itself is lacking, it is among the preceptors rated less-than-superior; and their former interns recall a dislike for this lack of interest in the role of "practical teachers."

A further indication of interns' reaction to their preceptor's function as a practical teacher is their response to a question about their attitude toward becoming a preceptor. Only three out of the 50 former interns who answered the question are already qualified as preceptors.

Sixty-nine percent of the interns in group A-B who answered the question said that they would want to qualify as preceptors. Most who would not said that they are in medical or law school or that their pharmacy could not use another employee (intern). Eighty-six percent of the

interns in group C-D who answered this question said that they would like to qualify as preceptors.

When asked whether they would be willing to put more preceptorial effort into the practical instruction than their preceptors did, about half the A-B group said they would. Nearly all (eight) of those who say they would not explained that they could not do any better than their own preceptors did. The other intern said, "I do not feel I would be patient enough to give the intern or extern the instructions and help to do justice to the job." In the C-D group, 15 of 17 former interns indicate that they would put more effort into the preceptorship. One of the two who would not is in medical school; the other said, "I felt I was well enough prepared with the practical aspect. It was the experience and familiarity with the products that I lacked."

Thus, a high proportion of the interns aspire to becoming preceptors. Perhaps surprisingly, a high proportion of the intern-respondents in group C-D do not let deficiencies they feel in their preceptor's over-all effectiveness influence them negatively in their wish to become a preceptor. However, a higher proportion of interns in group C-D than those in group A-B indicated that they would try to do better than their preceptors did. Interns who rate their preceptors as superior would tend to follow their preceptor's example, while those who rate their

preceptors over-all as not-superior would attempt to improve on their preceptor's effectiveness as a practical teacher.

Hospital Pharmacy Experience

A greater proportion of the superior-rated preceptors (59%) than of those rated not-superior (33%) feel that hospital experience should be required or at least recommended, for the intern. These preceptors see such experience mainly in terms of giving the interns a better picture of what hospital pharmacy practice is like; while some see it as a professional essential that the intern become acquainted with all types of pharmaceutical practice, and suggest that the intern be required to spend three months in a community pharmacy, three months in a hospital pharmacy, three months in a clinic pharmacy, and three months with a wholesale druggist. Although difficult to put into practice, it would, they feel, broaden and help him decide what field he is best suited for. Two preceptors feel that hospital pharmacy experience would provide contact with types of medications seldom encountered in a community pharmacy.

Those interns (about 40%) who agree that hospital pharmacy experience should be required or recommended stress the value of such experience in rounding out their education, allowing them to more readily choose their proper field and giving them experience in handling products they would not encounter in a community pharmacy. As one intern said,

"Hospital pharmacy can be, and usually is, much different from retail pharmacy. The types of drugs used are different and the methods of work are different. This can be invaluable experience for retail pharmacy on many occasions and helps to round out the experience and education of the resultant pharmacist."

Slightly more than one-half (53%) of the preceptors in the sample and well over one-half (64%) of the interns oppose any hospital pharmacy experience for the intern. The proportion of interns opposing hospital pharmacy experience is greater in group A-B than in group C-D. Both preceptors and interns who feel this way said that it is either unnecessary or impractical. Many feel that there are simply not enough hospitals available to put such a plan into operation. Others feel that the intern should be able to get all the experience he needs in a community pharmacy, and should not have to work in a hospital, especially if his interests lie elsewhere. One intern stated the feelings of many when he said, "Unless a person wants to work in a hospital pharmacy after he graduates, there is no reason that this should be a requirement. He gets enough experience in the retail store."

Thus, preceptors and interns vary widely in their reaction to hospital pharmacy experience. More superior-rated pharmacists than those rated as not-superior recognize some advantages to hospital pharmacy experience, even though in some cases they could not say what these advantages are.

As one preceptor said, "I think I approve of it because I would have liked to have had the experience myself." Interns are still more critical. Even some former hospital pharmacy interns feel it should not be made a general requirement.

Attitude Toward Suggested Changes to be Made in the Program

Orientation Institutes for Interns. Approximately two-thirds of the preceptors in both groups feel that a two- to three-day orientation institute for the interns prior to graduation would be valuable, rating it between 8 and 10, on a 10-point scale. Preceptors who favor this suggestion generally indicate a felt need for such guidance, as shown by the comment, "The interns need guidance which to date has apparently been lacking. Many come in with a rather confused idea of what is expected of them and look to me for guidance. I find that I myself am often lacking in the ability to explain it all fully to him." In contrast, those preceptors who do not favor a two- to three-day orientation institute feel that the intern does not need such guidance, as exemplified by the comment, "I don't like the [length of] time on there. It is not necessary, especially if the intern has had some experience already." On the whole, however, the idea seems worthwhile to the majority of the preceptors in both groups.

Longer Institutes for Preceptors. A suggested two- to three-day institute for preceptors, to be held every other year, is vigorously opposed by two-thirds of the preceptors in both groups. Their comments indicate that "a session lasting two to three days would certainly not be practical." Many preceptors feel that they could not leave their pharmacies for such a long time; others feel it would be asking too much of a preceptor. A few remarked that from their previous experience with preceptors' conferences so little was accomplished or learned that "dragging it out" to two or three days would be fruitless. Six preceptors (five in group A-B) indicate strong support of the idea by ranking it 8 through 10 (on a 10-point scale), but indicate that they support the idea, and not its practicality.

Thus it seems clear that more extensive training of preceptors for their teaching role, in the sense of the test question, could not be undertaken without encountering major resistance among the practitioners concerned. If preceptors could be reached with such training without the threat of disrupting operation of their pharmacies, one infers that many attitudes might change. Other comments suggest, however (see below) that further effort toward improving the present preceptors' conference may be a strategic prerequisite to proposing a lengthened program.

Visiting Field Advisor. Two-thirds of the preceptors rated superior and one-half of the not-superior indicate, by their ratings of 7 through 10 and comments, strong support for the idea of a field advisor, to visit teaching pharmacies. Reasons for supporting the suggestion contrast markedly with reasons other preceptors give for opposing the idea. About a third who favor the suggestion feel that there has been a longstanding need for such a man, and that the one-time director in Wisconsin[1] had been of great help. Those who oppose the idea say that it would be impractical and unnecessary, that he would interfere, and that the previous director proved to be unsatisfactory. Many emphasize that such a person would have to be carefully selected on the basis of his interest, experience and maturity. Ten preceptors (six in group C-D) indicate support for the idea but are not strongly enthusiastic, and prefer to reserve final judgment until they see what kind of a job such a field advisor would do.

In short a carefully-selected director of internship training, according to most preceptors in both groups, could aid them greatly in their work as practical teachers.

Textbook for the Interns. The idea that a textbook could be provided to help the intern during his period of

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1. In 1961, an assistant to the Secretary of the Wisconsin Board of Pharmacy was hired to travel around the state in connection with the controlled internship program. Preceptors refer to him as a director of the program.

practical training receives most support from preceptors in group A-B. Only one preceptor in this group definitely opposes the idea. Most preceptors who favor a textbook think that it should be for them as well, as they feel that they themselves could be better informed on what is expected of them than they presently are.

Opposition to a textbook centers among preceptors in group C-D, where a third of them say that the textbook "would not be practical." Some preceptors comment to the effect that the intern "is through with his book-learning," and that if the internship program can be covered in a textbook, it could be learned in school. Such criticism overlooks the role that a text or manual can play in any learning experience, but the majority recognize that such a textbook could find a useful place in the internship program.[2]

Training Bulletins for Preceptors. The training bulletin for preceptors proposed in our test question is favored by a high proportion of preceptors in our sample, as was also found by Sharp in his study.[3] This suggestion met with little opposition (only six preceptors give it a rating lower than 5 on the scale). Approximately three-quarters of the preceptors feel that it would have practical

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2. Such a textbook would of course be quite different from the useful little Pharmacy Preceptor's Guide, distributed by the National Association of Boards of Pharmacy.

3. Sharp, Pharmacy Trainee Program, p. 43.

use and better guide them in their training of the intern. Coupled with Sharp's findings, this suggests that a training bulletin should be sent to preceptors, perhaps every three months, which Sharp's group of preceptors considered the most appropriate frequency.[4]

When preceptors in the A-B and C-D groups are compared as to their rating of these suggestions, no clear difference appears. This tends to deny the hypothesis that preceptors rated as superior tend to be more accepting of proposals for improvement of the internship as a learning experience than are the preceptors rated not-superior.

Dealing with Intern's Problems, Ethics and Professional Conduct

Intern's Problems. Many interns experience problems in the course of their practical training with which the preceptor could be of assistance. But how does the preceptor learn of these problems, and how does he deal with them?

When asked if they set aside definite periods, away from customer interruptions, for discussion with the intern, the same proportion of preceptors rated superior and not-superior indicate that they do so. Six preceptors of 40 sit down at least once a month with their interns to discuss problems that arise in the internship training; three

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4. Ibid., p. 42.

do so weekly. All of these preceptors indicate that they find the practice extremely beneficial: "I remember that this was stressed at a preceptor's conference, and I feel it is of great value. The intern gets to feel that I am interested in his problems and doesn't feel he has to keep them to himself."

The majority of the preceptors in the sample (78%) said that they do not hold conferences regularly, but talk to the interns "as the occasion demands." Many feel that this is all that is required: "Though consistency is an advantage, to hit the nail at the right time is an overbalancing factor." Three preceptors indicate that, despite not holding regular conferences, they would be of value and they would like to adopt such a plan if they had the time.

How do the interns feel about the conferences? The majority (69%) of those who participated in regular conferences with their preceptors feel that it was highly beneficial; 26% indicate that they were somewhat useful.

The majority of the interns who answered this question (63%) indicate that their preceptors did not hold regular conferences with them.[5] Of these 32 interns, 19 mention subject areas that they think could have been beneficially covered if such conferences had been held. The most frequently mentioned topics are: drugs (properties and uses),

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5. In two cases, interns disagree with their preceptors as to whether or not regular conferences were held.

customer relations, and pharmacy management. Some former interns would have liked to discuss with their preceptors the internship program in general and mistakes that they made on the job.

In short, the majority of preceptors do not hold regular discussion periods with their interns, but the majority of their interns feel that this would be beneficial. Although many preceptors feel that such conferences are not necessary, the interns tend to disagree; and the satisfaction shown by both preceptor and intern from having such conferences and other evidence indicate that such a conference probably fills a definite need.

Ethics and Professional Conduct. Only five preceptors in our sample, all rated as superior, systematically cover specific requirements of the code of ethics with their interns. Four of these preceptors indicate that they went over the state code of ethics with the interns at the outset; the other says that she had a book on professional ethics that she asks all of her interns to read.

Eighty-eight percent of the preceptors interviewed indicate that no systematic way of dealing with professional ethics is followed. Four rated superior and three not-superior say that they depend on their own example to fulfill this duty, as indicated by the exemplifying comment: "...We think we are operating our pharmacy according to a very high code, and this in itself serves to guide them." The most common method of dealing with professional ethics

(as indicated by 16 preceptors, an equal proportion from each group) is by discussion as an incident arises that embodies an ethical problem. "An occasional situation would arise which involved both ethical and professional relations with customers and doctors. We would discuss the situation thoroughly and mention any ethical principles that should guide us in dealing with such situations." Four preceptors in group C-D said that they assume that the intern already knows all he has to know with respect to ethics. Four preceptors in group A-B and five in group C-D (23% of the total) said that they never discuss ethics with their interns.

Sixty-six percent of the former interns sampled could recall ways in which their preceptor helped them make high ethical standards a part of their routine way of work. Of these interns, 52% rated their preceptors as superior. Interns most commonly mention the example set by the preceptor and the close supervision he maintains as the main methods by which they acquired ethical standards of conduct. The examples set vary between two extremes, however. One intern who rated his preceptor as superior said that he "just followed his perfect example"; while an intern who rated his preceptor as not-superior said, "He was actually unethical! E.g., he sold prescription-only drugs "O-T-C" to his old buddies, refilled prescriptions without authorization for these same old buddies. He showed by example what <u>not</u> to

do." Where a preceptor sets a poor example, interns must recognize and resist it, or else risk falling into the ways of their preceptor.

When dealing with matters of professional conduct, preceptors indicate that they rely upon their own example and upon discussions of problems as they come up to guide the intern.

Only four interns could recall, when invited to do so, an actual incident that arose in the pharmacy that illustrates the opportunity to learn standards of professional conduct. The comments of these interns who rated their preceptors as superior are worth noting:

> The competition was cutting prices and advertising such "discount prices" openly, both to the public and through sending letters to the area physicians. My preceptor refused to meet them at their own level (gutter level), and did not lower his prices, insisting instead that our fees were fair, honest, and deserved. He brought the matter to the attention of the local pharmacy association, which handled it to the best of its ability.
>
> A doctor had written a prescription for a drug with the dosage too potent to be dispensed. The doctor was very hard to deal with, and my preceptor explained how to call and check the dose without being sarcastic or telling the doctor you know the correct dosage. The call was made and the patient saved serious injury, and I learned the art of tact.
>
> Refusal by my preceptor to dispense amphetamine to customer without a prescription.

The fourth example is an intern's indication of an incident that provided a negative opportunity to learn:

> ...he bought [manufacturers'] samples from a local doctor and gave the same doctor liquor or other merchandise for these samples.

The majority of the interns could recall no incident, but some indicate that incidents probably occurred that could no longer be remembered. A few interns specifically indicate that they learned professional relations by observing their preceptors.

From the above data, it seems obvious that most preceptors rely upon example and timely discussion to impart standards of professional ethics and professional relations to their interns. At the same time there is reason to believe that with additional teaching aids and patterns, most preceptors could go more deeply and systematically into these areas that are so peculiarly suited to inculcation under actual conditions of practice.

Benefits from Experience in Internship Program

All preceptors in the sample feel that the time they spend training the interns is well justified. As Sharp found,[6] so also the preceptors in our group feel that the internship gives them more opportunity and stimulus to keep abreast of what is happening in the profession.

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6. Sharp, Pharmacy Trainee Program, p. 76.

Preceptors in both groups mention most frequently, as the main value of having an intern, that the intern "keeps you on your toes." Many preceptors said that they learn something from the intern, although the majority could or would not recall anything specific. Five superior-rated preceptors welcome the opportunity to learn from the intern what is being taught in the school of pharmacy since they themselves graduated.

When asked to recall specific examples of the preceptor learning from the intern, only 16 preceptors could or would do so, and 13 of these 16 preceptors are in group A-B. Interns bring new information to these preceptors on such diverse subjects as pharmacology, chemistry, preparation of ointments and ophthalmic solutions, dispersing and emulsifying agents, pharmaceutical arithmetic, and drug nomenclature, and on improved organization of particular sections of the pharmacy.

All interns but nine indicate that the time they spent on the internship program was well justified. The nature of the benefit is exemplified by one intern's comment, "I did not feel equipped upon graduation to take the life of a patient into my hands when dispensing prescription medication, I did well enough in school, but did not have enough familiarity with trade-name 'legend drugs' to feel confident that I had read the physician's prescription to the letter of its intent. It was good to have someone there to verify my work, and in one year I was ready to go

it alone." Five of the eight interns who do not feel the time spent was justified rank their preceptors as belonging to group A-B. The reasons for their negative view center about the program itself (mainly, they feel it is too long), rather than with the preceptor. The former interns served by group C-D who feel that the time was not justified attribute it partially to the preceptor. One commented, "My preceptors were of a mediocre variety."

It can be said that preceptors as well as interns feel, on the average, that the time spent on the internship program does have value. Preceptors often welcome the stimulus to keep up with the current developments in pharmacy; interns welcome it as an educational experience. In addition, almost three-fourths of the preceptors feel that the intern provides an important supplementary benefit in that he makes money for the pharmacy. Six preceptors said they probably break even with the interns they employ, one said he loses money, and four are undecided. Of those preceptors who feel that an intern is a definite financial asset, several explained that it is a slowly developing advantage: "In the first phase, he loses money. As time progresses, he starts breaking even; finally toward the end you are making money. It depends on the type of intern."

From these comments, it would appear that preceptors consider the average competent intern to be a definite asset, both as a source of professional information and stimulus,

and as a financial asset. The program is a source of satisfaction for most preceptors and their interns.

Criticisms of the Internship Program

Sixteen of 40 preceptors have no criticisms of the controlled internship program. They seem completely satisfied with it, and often see it as a step forward. Others said that any criticism would have to be of particular preceptors and interns, not the program as such: "The internship is a personalized thing. If the preceptor or the intern fall down, if they fall down together at the same time, it could be bad.... If there is any question about the qualifications of the preceptor, his right to act as a preceptor should be withheld."

These preceptors who did criticize the program feel that its main weakness is inadequate communication between the preceptor and the State Board of Pharmacy. The comments below illustrate the feelings of these preceptors:

> We need better communications with the directors. We could do a better job if the preceptor was briefed more specifically on his duties. Now, the preceptor is on his own.
>
> I want to be notified by the State Board about the exams, the results, and how satisfactory the notebook was. Perhaps in this way, we can learn where more can be done.
>
> The program is as good as the preceptor. This is where the bulletins can come in handy. Its very hard to send the preceptor to a two-day school. You must

> try to give him a more theoretical idea of what the program is about and let him work it into his own operation.
>
> I think the internship program could be better improved by giving it some better guidance.
>
> Changes occur of which you are not notified.... If you are going to have changes, it is their duty to inform all preceptors of these changes. After all, your license and the trainee's as well depends on your knowledge and obeyance of the laws.

Two preceptors offer more nebulous criticisms concerning the spirit of the program, as indicated by the comment: "It [the program] needs life, heart and breath. The intern comes to you with two things: youth and enthusiasm.... Over time, pharmacists tend to become calloused, hardened. When they become preceptors, it is too easy for them to forget human aspects." Three preceptors criticize the program as being too regimented, not allowing the intern to work on his own enough, and demanding that the intern put too much into his notebook. (The validity of such criticisms remains open to question.)

As Sharp found,[7] so also our group of former interns object to many aspects of the notebooks, which they were required to keep. They consider the writing up of prescriptions particularly onerous and of limited value. This criticism and dissatisfaction with poorly informed or qualified preceptors are the most common complaints. Some

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7. Ibid., p. 38.

interns (mainly those who rated their preceptors as superior) think that the business aspect of a pharmacy's operation could have been better taught to them; others feel that the preceptors could have taught them more about the properties and uses of drugs.[8] Less common complaints center on a presumed lack of close communications between the school and State Board, intern and preceptor, and on the lack of certain types of experience, such as in the hospital and wholesale fields of pharmacy.

Some criticisms by both preceptors and interns may seem unrealistic; others may hold a potential for future progress, including some emphasis on better communications between all parties concerned. Interns and preceptors have concrete suggestions for making some of these improvements, which will be mentioned further below.

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8. Three interns mentioned their feeling that the State Board examination should be arranged so that it could be taken sooner after completion of their internship. Reasons for opposing such a suggestion are given in "Internship in Wisconsin," Mortar and Quill (Spring, 1965), 14.

CHAPTER VI: SUGGESTIONS FROM THE FIELD FOR IMPROVING THE EDUCATIONAL VALUE OF THE PRECEPTORSHIP

The Preceptor's Training Conference

Preceptors were asked to suggest methods of improving various aspects of the controlled internship program. In addition, many preceptors suggested improvements in the five test questions asked of them in the early part of the interview (see Appendix A, p. 155). These were also included in the discussion.

Only one preceptor (a C-D rating) could recall anything specific learned at a preceptor's conference (Wausau) that he makes use of in his pharmacy: "They encouraged us to sit down and talk with the interns, and I have tried to do this." Though all other preceptors said they could not recall anything specific, some indicate that they probably did learn something useful at a conference, but with the passage of time they have forgotten.[1] However, nearly all preceptors being unable to recall anything suggests that the training conferences do not strongly impress the

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1. The last preceptor's training conference attended by most preceptors (70%) was held in Milwaukee (April 1962). Seven preceptors attended their last conference in Wausau (1963), the remainder in Madison (1960), Eau Claire (1961), and Milwaukee (1964). One preceptor could not recall.

preceptor; and the complaints voiced by some preceptors (illustrated below) raises a question whether these conferences have yet fulfilled their potential.

In fact, a negative impression frequently resulted from conferences, as indicated by comments of 18 preceptors. Representative comments that indicate dissatisfaction with the conferences are:

> No, I can't remember anything; in fact the conference was hardly impressive.
>
> After going so long, it gets to be old stuff. It might be okay for those younger preceptors.
>
> What's discussed at a conference doesn't make much difference to me.
>
> The last one was a repeat of the first, so nothing new was learned. They should change the program so that there would be more variety for us that are coming back for the second or third time now.
>
> It stank. All they did was to read what happened in the first, second, third and fourth quarters.
>
> That was the worst one they've ever had.

Not all preceptors feel that the conferences are unbeneficial. Seven preceptors (six in group A-B) specifically mentioned that they do gain some value from the conference. Five said that they welcome the opportunity to get together with other preceptors in order to exchange ideas, problems and suggestions. "I got more good out of that than any speaker they've ever had at a conference."

One preceptor said that he learned about the manual of the NABP at a conference and another said that he was more impressed by his obligation to the intern as a result of a conference.

Whether they are satisfied with the conferences or not, preceptors offer many suggestions as to how they could be improved. Commonly mentioned suggestions are that the conferences should break up into smaller groups for purposes of discussion, and that the preceptor should be furnished with outlines and guides at the conferences.

Less commonly mentioned, but interesting suggestions are quoted below:

> They should change the program so that there would be more variety for us that are coming back for the second or third time now.
>
> They should give more practical lectures, such as lectures on the newer incompatibilities.
>
> In one session they should have both preceptors and interns together. It would only have to last an hour or so, in order to find out if the interns have any questions while the preceptors are there to know what the problems are.
>
> If they could get someone to talk on customer relations it would be a help [in setting an example for interns].
>
> Incorporating a plan of points that should be covered in the store during the year, rather than spend time telling about laws etc. would be an improvement.

> I would also suggest that the conferences include more "practical" ideas for the preceptors. If you asked me to say what I mean by "practical," I'm sure I couldn't say.
>
> They could go over some of the current regulations which have come in during the past year or two, both on the state and federal level.
>
> They should have two training conferences - one for retail pharmacists and one for hospital pharmacists. If they had one for hospital pharmacists, I know I couldn't help but come away with something.

It can be seen that preceptors proffer both general and specific suggestions. If implemented, some would change the pattern of the conferences substantially; others would simply add new topics or new speakers to the present program. Comments by preceptors who had attended more than one conference seem to portend a developing attitude that would have to be changed if interest is to continue at a high level. Preceptors are becoming bored with the conferences -- they would like more variety, a change in format, less repetition from conference to conference. Sharp had concluded from his study (1964) "that preceptors are relatively well satisfied with Preceptor Training Conferences or do not wish to be bothered with suggesting new ideas which may never be implemented;"[2] there is at least

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2. Sharp, Pharmacy Trainee Program, p. 93.

now some evidence of dissatisfaction and of a felt need for more variety in format and content, including a constructive interest in improvement of the conferences by the typical preceptor. Perhaps one inference to be drawn from a few of the comments is that experienced preceptors would benefit from a conference different, and perhaps more specialized, than an orientation conference that must meet the needs of new preceptors.

The Intern's Preparation

Individual experiences of preceptors and interns produce different feelings as to how adequately prepared the interns are for the internship program after they leave school, perhaps reflecting the usual rather marked differences in ability among graduates. Twenty-eight preceptors (14 from each group) feel that their interns were well-prepared by their scholastic education to begin the practical training period, 10 do not think so (seven in group A-B) and two are undecided. Table 29, p. 130 shows aspects of pharmaceutical practice in which preceptors think the intern could be better prepared by the school. Preceptors who indicate that the school should be teaching more in practical areas could not specify exact topics that should be emphasized, but feel that the school is stressing the theoretical at the expense of preparing the intern for the practical work he would be required to do. One preceptor

TABLE 29: NUMBER OF PRECEPTORS SUGGESTING AREAS IN WHICH INTERN COULD BE BETTER PREPARED BY THE SCHOOL OF PHARMACY PRIOR TO THE INTERN'S PRACTICAL EXPERIENCE

Suggested Area	Number of Preceptors Suggesting		
	Group A-B	Group C-D	Total
Relations with public	3	2	5
Drug nomenclature	4		4
Teach more in practical area rather than theoretical	3	1	4
Pharmacy management	1	2	3
Prescription compounding and dispensing	1	1	2
Pharmacy law	1		1
Medical terminology		1	1

feels that the school should prepare the intern better for the transition or "let-down" he would experience when moving from the academic world to that of community practice.

Eighty-three percent of 52 interns (48% from group A-B preceptors) feel that six months experience prior to graduation as presently permitted, is the optimal arrangement. Interns who feel this way believe that to allow more practical experience prior to graduation would only lower the effectiveness of the program, as they feel they needed to complete academic training before completing all of their practical training. The 17% who feel otherwise contend mainly that they could get an equally beneficial preparation if they were permitted to earn as much experience credit as they wished prior to graduation.

About one-half of the preceptors in each group feel that the full year of practical experience is necessary adequately to prepare the intern to practice on his own. Nine preceptors (four in group A-B) feel that six to nine months would be adequate; four said that it depends on the individual; and six preceptors (three from each group) feel that interns often are not fully qualified to practice without supervision for at least one to three <u>years after</u> he receives his licence.

Table 30, p. 132 shows the areas in which former interns feel they could have been better prepared prior to completion of their internship. Most interns feel that

TABLE 30: NUMBER OF INTERNS SUGGESTING AREAS IN WHICH THEY COULD BE BETTER PREPARED PRIOR TO COMPLETION OF INTERNSHIP

Suggested Area	Number of Interns Suggesting Group A-B	Group C-D	Total
Over-the-counter products	1	5	6
Orthopedic appliances	3	2	5
Diabetic supplies	2	3	5
Pharmacology	1	3	4
Pharmacy management	2	1	3
Poisons and antidotes		3	3
Relations with public	1	1	2
Prescription compounding and dispensing		2	2
Veterinary supplies	1		1

pharmacology and knowledge of over-the-counter products could have been more thoroughly taught in school, whereas in all other areas, they suggest that the preceptor could have done more. Since few pharmacies in the sample carry orthopedic appliances, it is not surprising that ten interns explicitly mention or imply that either the school or the teaching pharmacies should provide more adequate knowledge of such products to future practitioners.

Most preceptors and interns, it will be noted, are quite satisfied with the length of the program, the amount of time allowed prior to graduation, and the preparation the program affords to the interns. However, unprompted suggestions leave specific questions to be considered concerning improvement of instruction in such areas as relations with the public, drug nomenclature, orthopedic appliances, and diabetic supplies, over-the-counter products and pharmacology.

Suggestions to Increase Effectiveness

When preceptors were asked to suggest ways of increasing effectiveness in four different areas of preceptorial instruction, results were disappointing, since approximately three-quarters of the preceptors offered no suggestions.[3] Attempts to answer the question frequently

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3. Perhaps this was because the question came upon them suddenly, and required more thought than they could then give it. At first asked towards the end of the interview, the question was asked at the beginning of the interview of the last 12 preceptors, but no difference in response was found.

amounted to no more than criticism of the school or of the internship program for allegedly not teaching interns adequately in such matters as pharmacy management, ethics and professional conduct, therapeutic properties of prescription drugs and over-the-counter products, or procedures of compounding and dispensing. If pressed for details, the preceptor's usual reaction was that he did not wish to go into the matter any further. Eight preceptors indicate that the only way to deal with these matters is to let the intern learn by experience and by talking with him about the problems he encounters.

To improve the preceptorial teaching of pharmacy management, six preceptors (four rated as superior) suggest that the intern be allowed to assume more responsibility in the actual operation of the pharmacy. Two preceptors indicate that they already use such a plan (with some of their interns), depending upon the individual's ability. One superior-rated preceptor relies upon weekly bulletins he gives to his interns, to acquaint them with aspects of managerial decisions. Another preceptor suggests that a book should be published for the intern in the pharmacy to help guide him in a systematic and orderly way to learn gradually all phases of a pharmacy's operation. Two preceptors mention their belief that any discussion of pharmacy management should come only in the latter half of the year of practical training.

Thirty-six of the 40 preceptors interviewed offer no specific suggestions on teaching professional ethics and conduct. Twenty-four of these (equally divided between the groups rated superior and not-superior) feel that their own example, coupled with discussions of problems as they come up, is the best method of handling such matters, while six think that the school should assume more responsibility, preferably through a required course in ethics. One preceptor suggests that the intern be required to handle problems that arise in dealing with physicians and the public so that he can gain experience in these areas. Another superior-rated preceptor said, "I would like to be able to confront the interns with some awkward situations, but I haven't given it enough thought as to how I would do it."

Concerning the properties of drugs, and procedures of dispensing (including compounding), 20 preceptors indicate that they let the interns learn these things themselves, or expect the school to have taught them what they need to know. Two preceptors said that they procure product-information cards from drug companies to help the intern learn about drug properties and uses. Several preceptors feel that the intern learns about the properties of drugs by a constant quizzing back and forth between preceptor and intern. Allowing the intern to learn compounding by actual experience, preceptors correct and guide the intern's attempts as the most frequently mentioned way they teach. Three preceptors said that they have interns prepare, or at

least examine, any prescriptions that pose special problems. One community pharmacist suggests that the intern be required to work for a time in a hospital pharmacy so he could gain the compounding experience he feels is now ordinarily minimal. The majority of interns feel that the amount of compounding they were required to do in school and in the pharmacy was about right (45 of 50 for compounding in school, 36 of 50 for compounding in the pharmacy), although 12 interns (all having served their internship in a community pharmacy) feel that too little compounding was done in the teaching pharmacy.

If preceptors and interns are given a hypothetical unlimited authority and resources to alter the internship program, they come up with a variety of suggestions for improving the program (see table 31, p. 137).

Preceptors and interns who suggest that the intern be required to spend time in different pharmacies have a dual purpose in mind: By serving three to four months in different types of pharmacies, the intern could become acquainted with different types of operation, and learn the difference between problems, methods of a clinic pharmacy, say, as compared with a community pharmacy in a shopping center. By moving from one establishment to another, the intern also would serve under different preceptors, thereby presumably gaining advantage from each one's experience.

Those who suggest that preceptors should be better selected and/or trained feel strongly that this could lead

TABLE 31: PRECEPTORS' AND INTERNS' PROPOSED MAJOR CHANGES FOR INTERNSHIP PROGRAM

Suggestion	Preceptors		Former Interns		
	Group A-B	Group C-D	Group A-B	Group C-D	Total
Eliminate part or all of notebook		1	10	7	18
Employ a director of internship training	5	4			9
Require interns to work in different pharmacies	1	1	4	2	8
Insist on better selection and training of preceptors	1		2	4	7
Improve communications between State Board, preceptors and interns	3	1	2	1	7
Require some experience in hospital[a]		2		3	5
Divorce supervision of program from State Board	1	1	3		5
Change time of State Board examinations	1		1	2	4
Relax supervision of intern	1	2	1		4
Require intern to gain some practical experience before graduation		1		2	3
Cut length of the program	1		2		3
Have inspector come around regularly				2	2
Require State Board to pay preceptors				2	2
Have panel or informal discussions between groups of preceptors and interns				2	2
Require intern to attend more professional meetings	1				1
Require intern to take course in relations with the public	1				1
Reevaluate periodicals intern must read	1				1
Better guidance of intern into career field	1				1
Teach the intern to write more neatly				1	1
Require intern to read more abstracts			1		1
Require preceptors to obtain some written work from interns			1		1

a. The two preceptors who made this suggestion are hospital pharmacists. Two of the interns served their internship in a hospital.

to unparalleled improvement, overcoming the presumed major limitation on the present program.

The most frequent suggestion by preceptors (nine) to improve the internship program is that a director of internship training be hired. The majority of these preceptors explain that the director could foster better relations between preceptors and the State Board, could better explain the specific requirements of the controlled internship program, and could also improve the effectiveness of the program. The improved communications asked by some interns and preceptors occasionally went beyond better communications of the program's requirements as such: "I think that all the communications sent by the State Board to the intern," said one preceptor, "should be sent in duplicate to the preceptor. There may be discussion or controversy about reports which the preceptor should know about. When the State Boards [examinations] are finished, the preceptor should get a report, telling him whether the intern passed or failed and what the cause of failure was."

Those who suggest that the length of the program be cut, feel that all of the practical experience should be gained after graduation, and should last no longer than six months (one intern said three months). Those who feel that the time of the State Board examinations should be changed feel that the intern should not have to wait so long in many cases for licensure. One preceptor and one intern

suggest that the examination should be split in two: a theoretical part after graduation and a practical exam after completion of the internship.

That many former interns suggest complete (three) or partial (14) elimination of the notebook is not surprising, as it has been a source of sporadic complaint for as long as it has been required. Most suggestions are not for its complete elimination, but rather for elimination of such parts as the prescription "write-ups" (eight interns), elimination of the interviews of members of other professions and the reports on them (five interns) and elimination of the written description of the pharmacy (one intern).

Preceptors and interns who suggest that the internship program should not be supervised by the Board of Pharmacy feel either that State Board control is too strict, or that a school, being more familiar with the educational process, could better administer a program of practical teaching.

Two former interns (who both had C-D preceptors) wish the State Board could pay preceptors to hire interns, thus preventing preceptors from being too money-conscious (e.g., from trying so hard to "get his money's worth out of us").

Two interns propose that a panel or informal discussion between groups of preceptors and interns in an area be held regularly. This suggestion illustrates a need various interns feel for gaining insight into attitudes and experiences of other preceptors. This suggestion has a purpose similar to the suggestion that interns be required to work in different pharmacies.

SUMMARY REMARKS

At a time when the worthwhileness of the legally-required experience, as usually offered, had been severely challenged and opened to change, it seemed timely to investigate the preceptorship as a teaching function in pharmacy. Wisconsin offered a particularly fertile ground for such a study because among all the states, its preceptors have functioned under the broadest controls and long enough to develop a substantial group of former interns with informed opinions.

To explore the dyadic relationship between preceptor and intern, in terms of a learning experience, it was decided to distinguish two groups of pharmacists at different levels of preceptorship, on the basis of the impressions of some of their interns (graduated 1959-1963). The combination of field studies and mail surveys applied to elucidate the meaning of "different levels" required adapting investigative techniques that probably have not hitherto been applied to preceptorship in a profession.

A former intern often recalled marked differences in the qualities of his preceptor; and the rating scale devised also showed an ability to indicate sharp differences between interns in the impressions they hold of their former preceptors. These differences appear more disparate, and on the average less favorable, than do the preceptors'

self-evaluation. Further investigations should show whether or not the rating scale produces sufficiently reproducible results and whether or not it can be refined.

An attempt has been made to interrelate certain information about the temperament of these preceptors, the environment in which they teach their trainees, some features that differentiate preceptors, and comparative views of preceptors and interns concerning the controlled program.

In particular, it has emerged that preceptors, when considered as a group, are markedly similar in their temperament, and do not differ from college men in general. However, superior-rated preceptors conduct their training in pharmacies that differ in certain respects from those of preceptors rated not-superior. The preceptors, whether rated as superior or not-superior, proffer suggestions that merit consideration in improving the controlled internship program as a period of practical learning.

Even though a larger sample were available, the interplay of personalities between intern and preceptor, and the counterplay of differences in ability, education, experience, and work environment may conspire to ever keep the exact formula for predicting or achieving "superior preceptorship" an enigma. Yet, even the present exploratory study has brought into view information and insight about the teaching relationship between preceptor and intern in their natural setting that hitherto has been obscure; and

this may be an opening wedge into improved methods and concepts of analysis and control of the preceptorship that can benefit both the public and pharmacy itself.

APPENDIX A: FORMS, QUESTIONNAIRES, AND INTERVIEW GUIDES

THE UNIVERSITY OF WISCONSIN
MADISON 6

OOL OF PHARMACY

MAILED FORM FOR INTERNS TO RATE HIS PRECEPTOR

Please think back on your internship with the preceptor under whom you worked last after graduation. Grade him honestly on each of the qualities listed below, using the grading scale shown at the right below:

YOUR IMPRESSIONS OF PRECEPTOR'S EFFECTIVENESS DURING YOUR INTERNSHIP

		GRADE
I.	Effectiveness in imparting management techniques to you	____
II.	Effectiveness in imparting professional information to you	____
III.	Effectiveness in transmitting to you standards of ethics, professional attitude and conduct	____
IV.	Proficiency in stimulating your devotion to the profession	____
V.	Sympathetic understanding of, and attitude toward, your needs	____
VI.	Devoting adequate time to your training needs	____

PLEASE USE THIS GRADING SCALE

A = EXCELLENT
B = GOOD
C = FAIR
D = POOR
F = UNSATISFACTORY

THE UNIVERSITY OF WISCONSIN
MADISON 6

OL OF PHARMACY

FIRST COVERING LETTER, WHICH ACCOMPANIED THE QUESTIONNAIRE TO ALL INTERNS

October 26, 1964

Dear Fellow Pharmacist:

You recently completed one of the important experiences in preparation for your life work: the pharmacy internship. Some preceptors, and some techniques of preceptorship, are better than others -- just as some students work more effectively than others. By gaining more insight into the internship phase of pharmaceutical training, we hope to contribute toward making Wisconsin's notable internship program still better.

You can give indispensable assistance to one part of our research study, though it takes only a moment, by completing with all honesty the enclosed rating chart concerning the preceptor under whom you worked last after graduation. You do NOT need to sign your name nor the preceptor's name.

With best wishes and warm thanks for your cooperation,

Glenn Sonnedecker
Professor

Bernard Des Roches
Research Assistant

P.S. Perhaps you can take now the 60 seconds or so needed to rate your preceptor. Before tomorrow morning please return the score sheet -- just drop it in the enclosed envelope and mail. If you would like a copy of the results of our complete study (when eventually published), in return for your favor of marking the chart, please send a separate postcard with your name and address. The name of no pharmacist will be used in our report.

THE UNIVERSITY OF WISCONSIN
MADISON 6

OOL OF PHARMACY

SECOND COVERING LETTER, WHICH ACCOMPANIED THE QUESTIONNAIRE TO NON-RESPONDENT INTERNS

October 26, 1964

Dear Fellow Pharmacist:

You recently completed one of the important experiences in preparation for your life work: the pharmacy internship. Some preceptors, and some techniques of preceptorship, are better than others -- just as some students work more effectively than others. By gaining more insight into the internship phase of pharmaceutical training, we hope to contribute toward making Wisconsin's notable internship program still better.

You can give indispensable assistance to one part of our research study, though it takes only a moment, by completing with all honesty the enclosed rating chart concerning the preceptor under whom you worked last after graduation. You do NOT need to sign your name nor the preceptor's name.

With best wishes and warm thanks for your cooperation,

Glenn Sonnedecker
Professor

Bernard Des Roches
Research Assistant

P.S. Perhaps you can take now the 60 seconds or so needed to rate your preceptor. Before tomorrow morning please return the score sheet -- just drop it in the enclosed envelope and mail. If you would like a copy of the results of our complete study (when eventually published), in return for your favor of marking the chart, please send a separate postcard with your name and address. The name of no pharmacist will be used in our report.

If you have not yet returned the questionnaire, would you do so soon? Your cooperation would be greatly appreciated.

THE UNIVERSITY OF WISCONSIN
MADISON 6

OF PHARMACY

FIRST COVERING LETTER, WHICH ACCOMPANIED THE QUESTIONNAIRE SENT TO INTERNS IN THE FINAL SAMPLE

January 12, 1965

Dear Fellow Pharmacist:

Your cooperation has permitted a study that promises to be of real usefulness to the internship program and to creating pharmacists for Wisconsin. Filling out the enclosed questionnaire is the last thing we have to ask of you and it is essential to the successful completion of the project.

You will see that this is information that only you, as a rather recent intern, can supply. If you will take this in hand, at your first chance (this evening?) we believe you will agree that what we ask you to do here is interesting, significant and crucial to the purpose at hand.

So you will feel no hesitation, no one is asked to sign one of these questionnaires and no one will be identified individually in our final report.

Along with our appreciation for your prompt cooperation comes our warm wishes to you for a satisfying New Year.

Sincerely,

Glenn Sonnedecker
Professor

Bernard Des Roches
Research Assistant

THE UNIVERSITY OF WISCONSIN
MADISON 6

OF PHARMACY

SECOND COVERING LETTER, WHICH ACCOMPANIED THE QUESTIONNAIRE TO NON-RESPONDENT INTERNS

January 12, 1965

Dear Fellow Pharmacist:

Your cooperation has permitted a study that promises to be of real usefulness to the internship program and to creating pharmacists for Wisconsin. Filling out the enclosed questionnaire is the last thing we have to ask of you and it is essential to the successful completion of the project.

You will see that this is information that only you, as a rather recent intern, can supply. If you will take this in hand, at your first chance (this evening?) we believe you will agree that what we ask you to do here is interesting, significant and crucial to the purpose at hand.

So you will feel no hesitation, no one is asked to sign one of these questionnaires and no one will be identified individually in our final report.

Along with our appreciation for your prompt cooperation comes our warm wishes to you for a satisfying New Year.

Sincerely,

Glenn Sonnedecker
Professor

Bernard Des Roches
Research Assistant

Time is running short! If you have not yet returned your questionnaire, your immediate attention would be greatly appreciated.

FORM USED TO RECORD TOTAL SALES VOLUME OF THE PRECEPTOR'S PHARMACY

STORE NO. ____

SALES VOLUME

____ Below $40,000

____ $40,000-$60,000

____ $60,000-$80,000

____ $80,000-$100,000

____ $100,000-$125,000

____ $125,000-$150,000

____ $150,000-$200,000

____ Over $200,000

FORM USED TO RECORD VOLUME OF NEW PRESCRIPTIONS PER DAY FILLED IN PRECEPTOR'S PHARMACY

STORE NO. ____

VOLUME OF NEW PRESCRIPTIONS PER DAY

____ Under 12

____ 10 - 20

____ 20 - 30

____ 30 - 40

____ 40 - 50

____ 50 - 60

____ 60 - 70

____ 70 - 80

____ 80 - 90

____ 90 - 100

Or approximate average no. ____

FORM USED TO RECORD DATA ON APPEARANCE
OF PRECEPTOR'S PHARMACY

CHECK LIST FOR DESCRIPTION OF PHARMACY

STORE NO. ____

1. TYPE: Check one or more than one:

Community pharmacy

____ Independent

____ Chain ____ Shopping center

____ Clinic ____ Medical building (other than group clinic)

2. TYPE OF OWNERSHIP: Check one or more than one:

____ Preceptor owns in whole or in part

____ Principally absentee ownership

____ Owned by hospital or other public or private institution

____ Owned principally by one or more physicians (within 5 miles ____; beyond 5 miles ____).

____ Other type of non-pharmacist principal owner

____ Owned by pharmacist(s) other than preceptor

3. EXTERIOR:

A. Window displays:

____ Totally commercial

____ Mixed professional and commercial

____ Totally professional

____ None (open to interior view)

B. Advertising appearance:

____ Three or more proprietary advertising signs

____ No proprietary advertising signs

____ Between 1 and 3 proprietary advertising signs

C. Designation of the pharmacy:

____ Termed "Pharmacy" ____ Termed "Drugs"

____ Termed "Apothecary" ____ Other:

____ Termed "Drug Store" _____

D. Pharmacy's main identifying sign: Check one or more than one:

____ Excellent appearance and condition

____ Less than excellent appearance or condition

____ Gaudy, or crude, or undignified

____ Subdued, or in good taste, or dignified

____ Part of advertising sign (e.g., Coca-Cola, Ex-Lax)

E. Imprecise promotional reference to competitors or self:

_____

4. INTERIOR:

A. Prescription work and dispensing area:

i) Location at ____ front; ____ near back; ____ near central area
____ nearly fully visible; ____ semi-visible; ____ nearly closed or hidden

ii) Prescription and O.T.C. drug and first-aid supply dispensing areas combined are approximately ____% of total (observer's guesstimate ____; owner's statement ____).

iii) Proportion of the front or face of the prescription work area (as defined by length of prescription case, counter, or designated area by signs or decor) that is devoted to products or signs unrelated to treatment or prevention of ill health or affliction): less than 0% ____; 10-40% ____; 40-70% ____; 70-100% ____.

iv) For conferences with staff, physicians, or other visitors pharmacy ____ does; ____ does not have a desk-nook or office.

B. Appearance of pharmacy aisles:

i) Departmentalization:

____ superior

____ average

____ below average

ii) Cleanliness:

____ superior

____ average

____ below average

iii) Dignity, orderliness, and "professional atmosphere":

____ superior

____ average

____ below average

iv) Some products used for medicinal effects ____ are;
____ are not on self-service display.

C. Personnel:

Number of fulltime personnel ____; of which ____ are licensed.

Licensed personnel ____ are; ____ are not differentiated from unlicensed personnel in some way visible to laymen.

Age of preceptor: ____.

D. Appearance of pharmacy walls, ceiling:

____ Clean

____ Deteriorating

____ Dirty

E. Appearance of floor:

____ Clean

____ Cluttered or dirty

F. Advertising appearance:

____ Advertising of non-pharmaceutical products dominates advertising visible from entrance.

____Two or more advertising placards (visible by walking length of pharmacy) offer treatment for afflictions (other than preventive or first aid) and/or play upon fears of poor health or affliction.

____Promotional materials hanging or suspended overhead judged out of character with a teaching pharmacy or the dignity of the central purpose of a pharmacy. Type and approximate extent: _____

_____

____Advertising features or imprecise claims probably inappropriate for a teaching pharmacy or an above-average pharmacy; specify:

_____

_____

_____

5. SPECIAL FEATURES:

____Truss-fitting or surgical or orthopedic garments and devices

____Display area for

____ Professional literature (pharmacists and/or physicians)

____ Public health pamphlets (laymen)

____Other; specify: _____

_____

FORM USED TO RECORD DESCRIPTION OF
PRECEPTOR'S LIBRARY FACILITIES

LIBRARY CHECK LIST STORE NO. ____

1. ____ New and Nonofficial Drugs

____ Merck Index

____ Modern Drug Encyclopedia

____ Facts and Comparisons

____ Remington's Practice of Pharmacy

____ Other _____

2. ____ Total number of professionally relevant volumes

3. ____ Total number of professionally relevant journals systematically saved for at least one full year

4. ____ Names of indexed saved journals: _____

_____

_____

_____

Method of indexing

____ Publisher's printed index

____ Pharmacist's alphabetical file

5. ____ Names of journals received by paid subscription: (NOT PART OF MEMBERSHIP DUES)

_____ _____

_____ _____

6. ____ Names of journals gone through systematically (not of course reading everything)

_____ _____

_____ _____

7. ____ During past 5 years, obtained any photostats or other photo-reproductions of any professional literature needed by either physician or pharmacist:
____ yes; ____ no.

8. ____ During past 5 years borrowed any professional books or journals: ____ Yes; ____ No.

9. ____ File of new product literature or clippings about newer drugs and health products: ____ Yes; ____ No.

10. ____ File of professional information or literature references: ____ Yes; ____ No.

11. ____ Approximate number of linear feet occupied by all such files _____

12. ____ Plan or method to encourage intern to use professional literature: ____ Yes; ____ No (other than internship regulations of Board)

INTERVIEW GUIDE -- THE PRECEPTOR

You are one of a pretty small group that has helped to pioneer a controlled internship program in this country. That's quite an opportunity. You could help guide the thinking on how to make the internship still better, by answering some questions for us.... You won't be mentioned by name. There won't be any way of identifying you in our report.

1. I wonder how worthwhile you think the following suggestions would be in improving the internship as an educational experience -- Would you just score each of these five suggestions between 1 and 10, depending on how useful the idea seems to you:

   1 would mean the <u>least</u> useful you can imagine
   10 would mean the <u>most</u> useful you can imagine

   i) There would be orientation institutes for interns perhaps lasting two or three days just before they graduate. Experienced preceptors would review with the interns as a group what they should try to get out of the internship, what the preceptor expects of them and what the State Board's objectives and regulations are. ____

   ii) There would be longer institutes for preceptors than we have had before -- perhaps lasting two or three days. You could be expected to attend the institute every other year. Experts in practical

training would help you get better organized and better informed on how to improve the internship as a learning experience. ____

iii) A field advisor or supervisor would visit with you and the intern occasionally, in your pharmacy. He would try to help you both get and use the ideas, materials and procedures that might improve the internship as learning experience. ____

iv) There would be a textbook published for the interns, which he could study during his months with you. It would give outlines and practical information, and references covering the things we want interns to learn most about on the job under your guidance. ____

v) There would be training bulletins sent to you and to other preceptors each month -- an exchange of ideas and information and experiences about the actual operation of a pharmacy.____

2. Where was the last preceptor's training conference held that you attended? Do you remember something that you made use of in your pharmacy as a result of the conference? What ways of improving the conferences do you suggest?

3. In what ways do you think you can give an intern the most benefit as a practical teacher?

4. Should it be required that part of every internship be served in a fairly large hospital pharmacy?

Yes ____ No ____ Why?

5. Have your interns been as well equipped for the transition from academic to practical work as you think they should be? Are there any skills now taught at school that would be better left to you to teach them? Should the school be teaching something that the intern now has to learn in the internship?

6. Have you had personal experience with this: Did you ever make it a practice to meet with an intern at set intervals, to discuss some of the various situations and problems that came up in recent work you were doing? By that I mean, did you sit down and talk with the intern, away from customer interruptions, rather regularly (say once a week or once a month)?

7. Do you have any systematic way of taking up with interns the specific requirements of the code of ethics -- either the state or national code? Have you found ways of going into standards of professional conduct with the intern as far as you think adequate for pharmacy's needs in the state?

8. The internship provides a planned program of supervised professional training to help the intern become a competent practitioner of pharmacy. In what ways do you think the internship as you have experienced it, still does not provide what pharmacy has a right to expect of it? How could this be remedied in your opinion?

9. Judging from the interns you personally have trained, when would you suppose the average graduate is ready or competent to practice pharmacy? Is it before or after the time he ordinarily is licensed?

10. Judging from your own experience in Wisconsin's internship, do you think the practical experience requirement has enough worth for professional purposes to justify the time you spent on it as a preceptor? (If not, why not?)

11. Have you yourself benefitted from being a preceptor? (I mean benefit other than the help your intern gave you as an employee?) Can you recall a single constructive idea about the practice of pharmacy that you learned from an intern? From the money angle, would you say that the interns had, in the end, lost money or earned money for your pharmacy?

12. a) Since you will not be identified by name in our report, give me an honest evaluation of yourself as a preceptor.... This scale will make it easier to grade yeurself. [Hand mimeo sheet]

b) An earlier study showed that preceptors and interns both mention four areas of training that should be especially emphasized. I wonder if you could make any suggestions, based on your experience, that might help the intern learn more in these areas... perhaps something you now do in working with the

interns that works especially well -- or perhaps something you would like to try when you have all the time and information you need. Let's take them one at a time:

Pharmacy Management:

Ethics and Professional Conduct:

Therapeutic Properties of Prescription and "OTC" Products:

Procedures of Compounding and Dispensing:

13. Suppose you had complete authority and resources to make just one single improvement in Wisconsin's internship as a period of practical learning. Based on your experience, what change would you make?

14. How long have you been a preceptor under the controlled internship program?

FORM USED BY PRECEPTORS TO EVALUATE THEMSELVES

EFFECTIVENESS AS A PRECEPTOR

NO. ____

		GRADE	PLEASE USE THIS GRADING SCALE
I.	Effectiveness in imparting management techniques	____	
II.	Effectiveness in imparting professional information ...	____	A = EXCELLENT
			B = GOOD
III.	Effectiveness in transmitting standards of ethics, professional attitude and conduct	____	C = FAIR
			D = POOR
IV.	Proficiency in stimulating devotion to the profession	____	F = UNSATISFACTORY
V.	Sympathetic understanding of, and attitude toward intern's needs	____	
VI.	Devoting adequate time toward intern's training needs	____	

QUESTIONNAIRE SENT TO ALL INTERNS IN FINAL SAMPLE

Please feel free to write on the back of the pages if you need more space.

1. In the time you spent with your last preceptor, what qualities, actions or specific traits did he display that were educational (teacher-function) as opposed to solely employer-function?

2. As you know, half of the Wisconsin practical experience requirement may be fulfilled before graduation. In view of your experience, does this seem about right?
YES ____ NO ____

Could more experience be permitted before graduation and still produce enough professional breadth and maturity in the average newly licensed pharmacist?
YES ____ NO ____

Please feel free to support your answer with comments:

3. Should it be required that part of every internship be served in a fairly large hospital pharmacy?
YES ____ NO ____

WHY?

4. Are you now authorized to serve as a preceptor in the state of Wisconsin? YES ____ NO ____

If answer to above was NO, do you want to qualify and serve as a preceptor in the foreseeable future?
YES ____ NO ____

4. (cont'd)

If YES, would you personally be willing to put more effort into the practical instruction part of it than your preceptor did? YES ____ NO ____

If NO, why do you feel this way?

5. You had to do a certain amount of compounding in school and in the internship.... In terms of making you safe to serve the public, do you think the amount of compounding IN SCHOOL was Too much ____; About right ____; Too little ____.

IN THE PHARMACY was Too much ____; About right ____; Too little ____.

Is there any part of the health services that you give to the public that you were not properly trained for by the time you finished your internship?

6. Do you recall ways, or methods used by your preceptor to help make high ethical standards a part of your routine way of work?

Can you recall an actual incident, in the pharmacy, that illustrates the opportunity in the preceptor-intern relationship to learn high standards of professional conduct?

7. Did your preceptor regularly hold talks with you, away from interruptions, to discuss some of the situations and problems that came up in recent work you were doing? YES ____ NO ____

If YES, did you find these: very beneficial ____

somewhat useful ____

of little value ____

If NO, and you feel periodic discussion periods would have been useful: Then in what general subject areas might they be most useful, to help an intern become a pharmacist highly creditable to the profession?

8. Judging from your own experience, do you think the one year you spent fulfilling the practical experience requirement is worth enough for professional purposes to justify the time you spent on it? YES ____ NO ____

If No, please give your reasons:

9. Picture yourself serving twelve months of internship under your ideal preceptor: What qualities would he have?

10. What part of your own internship could have been most improved, do you think?

10. (cont'd)

How could that be best brought about, in your opinion?

11. Suppose you had complete authority and resources to make just one single improvement in Wisconsin's internship as a period of practical learning. Based on your experience, what change would you make? (Let your imagination run wild on this one!)

Additional comments on the internship program:

THANK YOU VERY MUCH

APPENDIX B: DETERMINATION OF THE SAMPLE

REASONS FOR USING MEDIAN RATINGS

The scale on which former interns rated their preceptor is an ordinal scale; and, according to Siegel, "the statistic most appropriate for describing the central tendency of scores in an ordinal score is the median, since the median is not affected by changes of any scores which are above or below it, as long as the number of scores above and below remains the same."[1] Non-parametric statistical treatment of such data is necessary because, as Siegel points out, "when only the rank order of scores is known, means and standard deviations found on the scores themselves are in error to the extent that the successive intervals (distances between classes) on the scale are not equal. When parametric techniques of statistical inference are used with such data, any decisions about hypotheses are doubtful."[2]

TREATMENT OF QUESTIONNAIRE RESULTS

Basis for Division of Preceptors Into Groups

The median score was determined for each intern's six-factor rating of his preceptor. Since an A was assigned a

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1. Sidney Siegel, Nonparametric Statistics for the Behavioral Sciences, McGraw-Hill, New York, (1956), 25.
2. Ibid., p. 26.

value of 5, B a value of 4, and so on, down to F with a value of 1, a median score of 5.0 corresponded to an A, 4.5 to a B, 3.5 to a C, 2.5 to a D and 1.5 to an F.

In considering the preceptors' ratings, it was assumed that the former interns who rated their preceptors would in general have in mind an approximate valuation[3] as follows: If the intern considered his preceptor as normally adequate or having medium performance on any one characteristic, he would rate him as "C." If he considered him as more than adequate, he would use either "A" or "B"; for a performance that he felt less than adequate for his needs, "D" or "F" would be used. On this basis, the preceptors were divided into groups according to their final median ratings. These two groups were called "Group A-B" and "Group C-D." Thus, those preceptors in Group A-B had an over-all rating of A or A-B or B and those in Group C-D had a final rating of C or C-D or D.

Basis for Inclusion and Rejection of Ratings

For those preceptors who were rated by three or more interns, the following method of dealing with the scores was used. A single score for each preceptor was determined by taking the median of the several median scores derived

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3. The assumed values appeared to be substantiated by questioning six people, who were not connected with the survey, about the meaning they inferred from the rating scale.

from the six-factor ratings by the several interns. Hence, if three interns ranked a preceptor as "A," "A" and "C," respectively, the preceptor had an over-all median score of "A," and was thus classed in Group A-B.

Preceptors rated by only two interns were excluded from the sample if both interns did not clearly categorize their preceptor as belonging in the same group, either A-B or C-D. For example, if one intern rated a preceptor as "C," and the other as "A," this preceptor was excluded from the sample. If the two interns rated him as "A" and "B," respectively, he was included in Group A-B; if both rated him as "C" or "D" or "F," the preceptor was put in Group C-D. (No preceptor received an over-all median lower than a D.) The distribution seems to be approximately normal (see Graph 1, p. 24), even though there were two scores embraced by Group A-B and three scores embraced by Group C-D. The following table shows examples of how various combinations of mean ratings were treated.

CLASSIFICATION OF SEVEN COMBINATIONS OF POSSIBLE RATINGS BY ONE TO FIVE INTERNS

POSSIBLE COMBINATIONS OF RATINGS	INTERNS OF SAME PRECEPTOR 1	2	3	4	5	CATEGORIES
1	A	A	B	C	C	Group A-B
2	A	A	C	C	C	Group C-D
3	A	C				Rejected
4	B	C				Rejected
5	A	B				Group A-B
6	A	D				Rejected
7	D	D				Group C-D

Final Sample

This method produced the following numbers and distribution of preceptors, constituting the final sample:

GROUP A-B			GROUP C-D			REJECTED
A	A & B	B	C	C & D	D	
7	5	11	12	5	1	18

Note: Besides classifying the preceptors into one of two broad groups, A-B or C-D, they were subgrouped more narrowly (A, A & B, B, etc.) within the specific letter-ratings assigned (six-factor median) by their interns. Thus a preceptor who receives ratings of "A" and "A" is in Group A-B, but is also sub-classified as "A" for use in certain comparisons.

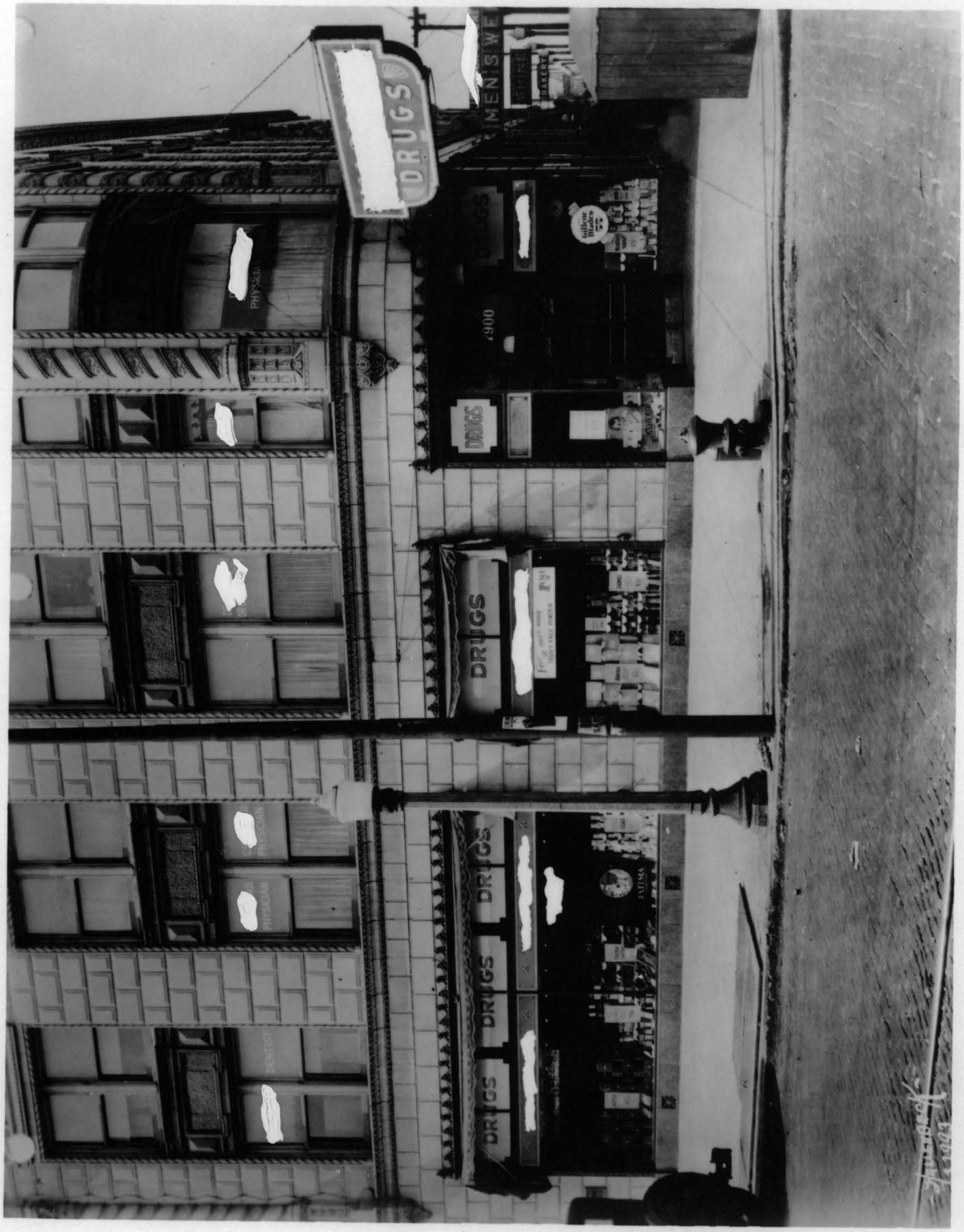
APPENDIX C: HYPOTHESES

1. Preceptors who are rated as superior by interns recognize their superiority by self-rating on the same scale.
2. A group of preceptors rated superior were earlier superior academically as a group.
3. Pharmacists who maintain quantitatively superior literature resources are more likely to have qualities that former interns rate as superior preceptorship.
4. The rating of a group of pharmacists as superior preceptors has no discernible relationship to physical and administrative characteristics of the preceptorship setting.
5. The Guilford-Zimmerman Temperament Survey shows patterns of test scores that can help account for one group of pharmacists having been rated superior preceptors rather than not-superior.
6. Preceptors rated as superior tend to be more accepting of proposals for improvement of the internship as a learning experience than are the preceptors rated not-superior.
7. The proportion of the preceptors having had four or more interns is larger in the group rated superior than in the group rated not-superior.
8. The proportion of hospital-preceptors in the group rated superior will be larger than in the not-superior group.

APPENDIX D: PHOTOGRAPHS

PHOTOGRAPH 1 - EXTERIOR

PHOTOGRAPH 2 - EXTERIOR


DRUGS
DRUGS
DRUGS

PHOTOGRAPH 3 - EXTERIOR

PHOTOGRAPH 4 - INTERIOR

PHOTOGRAPH 5 - INTERIOR

PHOTOGRAPH 6 - INTERIOR

APPENDIX E: THE GUILFORD-ZIMMERMAN TEMPERAMENT SURVEY

PURPOSES OF THE SURVEY

The Guilford-Zimmerman Temperament Survey is a condensation of three personality inventories developed by Guilford and co-workers.[1] Because of the time required to administer and score these three inventories a need was felt for a single inventory that would serve a similar purpose more efficiently.

"With these considerations in mind, a new inventory was constructed with the following objectives uppermost: (1) a single booklet of items; (2) a single answer sheet; (3) an efficient scoring method; (4) a coverage of the traits proven to have the greatest utility and uniqueness; and (5) condensations and omissions of trait scores where intercorrelations are sufficiently high."[2]

In developing this inventory, which was utilized in the present study, Guilford wanted to identify a number of

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1. These three inventories are: (1) The Guilford-Martin Personnel Inventory; (2) The Guilford-Martin Inventory of Factors GAMIN; and (3) An Inventory of Factors STDCR. All are available for professionally controlled applications, from Sheridan Supply Company, Beverly Hills, California.

2. Guilford and Zimmerman, Manual, p. 1.

relatively independent aspects of personality. The objective was to develop separate scales that are internally coherent and that are relatively independent of each other.[3]

USES OF THE SURVEY

The term "Survey" in the title implies a first, general assessment of ten traits of an individual. The pattern of intensity of these traits provides clues to an individual's personality, and can be turned to practical purposes, such as providing one type of information helpful in the selection and placement of supervisory personnel.

In condensing the three earlier personality tests to form the Guilford-Zimmerman Temperament Survey, 595 questions were reduced to 300, arranged so that the ten traits are each represented by 30 items.[4] For scoring convenience, Guilford and Zimmerman weighted the responses either 0 or +1 only.[5]

Four characteristics of the Survey should be particularly noted:

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3. Thorndike and Hagen, Measurement, p. 333, 336.

4. J. P. Guilford and W. S. Zimmerman, "The Guilford-Zimmerman Temperament Survey," Journal of Consulting Psychology, 14 (1950), 162.

5. Guilford and Zimmerman, Manual, p. 162.

1. It is based upon the responses of normal everyday people, not the overtly maladjusted or the institutionalized.

2. Its scales are set up by internal analyses, by study of the "going together" of groups of items.

3. Responses are taken at face value. Their significance is assumed to be given by their obvious content.

4. The respondent may endorse as many or as few of the items as he wishes; his choices are not forced or constrained.[6]

The ten traits that are rated in the Survey are listed below (with the opposite or negative expression of each trait shown in parentheses):

1. General Activity, Energy (Inactivity, Slowness)

2. Restraint, Seriousness (Impulsiveness, Rhathymia)

3. Ascendance, Social Boldness (Submissiveness)

4. Social Interest, Sociability (Shyness, Seclusiveness)

5. Emotional Stability (Emotional Instability, Depression)

6. Objectivity (Subjectivity, Hypersensitiveness)

7. Friendliness, Agreeableness (Hostility, Belligerence)

8. Thoughtfulness, Reflectiveness (Unreflectiveness)

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6. Thorndike and Hagen, Measurement, p. 337.

9. Personal relations, Cooperativeness (Criticalness, Intolerance)

10. Masculinity, Femininity (Femininity, Masculinity)[7]

The blanks are scored by hand. "Profile charts" are available, as well as a manual, to aid in recording and interpreting results.[8]

RELIABILITY AND VALIDITY OF THE SURVEY[9]

"Estimates of the total score reliabilities were made in various ways, based upon samples of 523 male college students and 389 female students. Kuder-Richardson formulas[10] were applied to the data for men and women separately and combined. Odd-even and first-half-second-half correlations were obtained for a random sample of 100."[11] "The reliabilities cluster about .80 and are adequate, though not strikingly high."[12]

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7. Taken from the Profile Chart For The Guilford-Zimmerman Temperament Survey.

8. Guilford and Zimmerman, Manual, p. 1, 2.

9. See J. P. Guilford, "New Standards for Test Evaluation," Educational and Psychological Measurement, 6 (1946), 427-428 for the author's views on reliability and validity in psychological tests.

10. See Truman Lee Kelley, Fundamentals of Statistics, Harvard University Press, Cambridge, Mass. (1947), 404.

11. Guilford and Zimmerman, Manual, p. 1, 2.

12. Thorndike and Hagen, Measurement, p. 336.

Since the Survey attempted to identify a number of relatively independent aspects of personality, low correlations of different scores are required. "They tend to be. However, certain of the scores show rather substantial correlation: .... Ascendance and Sociability, Emotional Stability and Objectivity, Friendliness and Personal Relations, and Restraint and Thoughtfulness ... are far from independent, and the information provided by the scores is overlapping. In a sense, the inventory is only partially efficient because of the duplication in the different scores.... In most cases, however, each score provides information about a new and distinctive aspect of the individual."[13]

Guilford and Zimmerman themselves conclude, "the internal validity or factorial validity of the scores is fairly well assured by the foundation of factor-analysis studies plus the successive item-analyses directed toward internal consistency and uniqueness. It is believed that what each score measures is fairly well defined and that the score represents a confirmed dimension of personality and a dependable descriptive category."[14]

The Temperament Survey, being a personality test, is subject to other factors that affect its reliability and

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13. Ibid., p. 336-337. Contrast this statement with that by Guilford and Zimmerman in the Manual, p. 6.

14. Guilford and Zimmerman, Manual, p. 7, 8.

validity. Since the questions may be answered with "?," the meaning attached by the respondent to this indecisive answer may affect the validity of the results. Too many such responses seriously cripples the validity of the test for any particular individual. Guilford conducted a study of this problem on the three personality tests which preceded the Guilford-Zimmerman Temperament Survey. The author's inconclusive results are reflected in his statement that "while the indecision score indicates something stable about individuals, it needs to be factor analyzed to be understood and test conditions that will assure better discriminations at the lower levels are needed for a score of practical use."[15]

There is also the problem that persons who complete the blank may realize what the test is attempting to determine, hence adjust their answers in an attempt to obtain a more favorable profile. It is possible to determine to a certain extent whether a respondent had some insight into the test, as the chance of obtaining a score above the median on eight of the ten traits is one in 20.[16]

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15. J. P. Guilford, "The Validation of an 'Indecision' Score for Prediction of Proficiency of Foremen," The Journal of Applied Psychology, 38, No. 4 (1954), 226.

16. Guilford and Zimmerman, Manual, p. 11. J. A. Kimber studied the problem of insight on personality tests, and concluded that students differ greatly in the amount of insight which they possess. He found that women exceed men in the amount of insight shown, and that there was little relationship between intelligence and insight. Men were found to be superior in

It should be mentioned that various investigators have a view on the over-all validity of personality tests. Albert Ellis, who conducted exhaustive research on the subject, concluded that "group-administered paper and pencil personality questionnaires are of dubious value in distinguishing between groups of adjusted and maladjusted individuals, and that they are of much less value in the diagnosis of individual adjustments of personality traits."[17]

Despite limitations that may be applicable to the Guilford-Zimmerman Survey, many competent workers have found it useful during the past 15 years or so, when used with discretion. It was selected for the present study as the most appropriate and practicable test of its kind known to us, for the purpose at hand.

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intelligence, but inferior in insight. J. A. Morris Kimber, "The Insight of College Students Into the Items on a Personality Test," Educational and Psychological Measurement, 7 (1947), 420.

17. Albert Ellis, "The Validity of Personality Questionnaires," Psychological Bulletin, 43 (1946), 426.

The Guilford-Zimmerman Temperament Survey

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DO NOT WRITE IN THIS BOOKLET

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INSTRUCTIONS: In this booklet you will find a number of statements. Read each statement carefully. If the statement seems to be true, or if you agree with it, mark answer "Yes" on your answer sheet. If the statement is more false than true, or if you disagree with it, mark "No." If you cannot decide between "Yes" and "No," you may mark answer "?" BUT AVOID DOING THIS IF POSSIBLE.

Be sure to answer every item.

There are no "right" or "wrong" answers in the usual sense of a high score being necessarily the best. The purpose of this Survey will be served best if you describe yourself and state your opinions as accurately as possible.

You may notice that many items are similar. Actually, no two items are exactly alike.

Notice that the numbering of items on the answer sheet follows across the rows rather than down the columns.

You may turn the page and begin with the items now unless the examiner tells you to wait.

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1. You start to work on a new project with a great deal of enthusiasm 1
2. You would rather plan an activity than take part in it 2
3. You have more than once taken the lead in organizing a project or a group of some kind 3
4. You like to entertain guests 4
5. Your interests change quickly from one thing to another 5
6. When you eat a meal with others, you are usually one of the last to finish 6
7. You believe in the idea that we should "eat, drink, and be merry, for tomorrow we die" 7
8. When you find that something you have bought is defective, you hesitate to demand an exchange or a refund 8
9. You find it easy to make new acquaintances 9
10. You are sometimes bubbling over with energy and sometimes very sluggish 10
11. You are happiest when you get involved in some project that calls for rapid action 11
12. Other people think of you as being very serious minded 12
13. In being thrown by chance with a stranger, you wait for him to introduce himself 13
14. You like to take part in many social activities 14
15. You sometimes feel "just miserable" for no good reason at all 15
16. You are often so much "on the go" that sooner or later you may wear yourself out 16
17. You like parties you attend to be lively 17
18. If you hold an opinion that is radically different from that expressed by a lecturer, you are likely to tell him about it either during or after the lecture 18
19. It is difficult for you to chat about things in general with people 19
20. You give little thought to your failures after they are past 20
21. You often wonder where others get all the excess energy they seem to have 21
22. You are inclined to stop to think things over before you act 22
23. You avoid arguing over a price with a clerk or salesman 23
24. You would dislike very much to work alone in some isolated place 24
25. You often find it difficult to go to sleep at night because you keep thinking of what happened during the day 25
26. You find yourself hurrying to get places even when there is plenty of time 26
27. You like work that requires considerable attention to details 27
28. You are satisfied to let some one else take the lead in group activities 28
29. You enjoy getting acquainted with people 29
30. It takes a lot to get you emotionally stirred up or excited 30
31. You work more slowly and deliberately than most people of your sex and age 31
32. You are a carefree individual 32
33. When a person does not play fair you hesitate to say anything about it to him 33
34. It bothers you to have people watch you at your work 34
35. You have usually been optimistic about your future 35
36. You like to have plenty of time to stop and rest 36
37. You take life very seriously 37
38. You enjoy applying for a job in person 38
39. You would like to be a host or hostess for parties at a club 39
40. You often feel grouchy 40
41. You are the kind of person who is "on the go" all the time 41
42. You often crave excitement 42
43. The thought of making a speech frightens you 43
44. You find it easy to start conversation with strangers 44
45. You often feel guilty without a very good reason for it 45
46. People think you are a very energetic person 46

47. You sometimes make quick decisions that you later wish you hadn't made..... 47
48. You find it difficult to ask people for money or other donations, even for a cause in which you are interested..... 48
49. You are so naturally friendly that people immediately feel at ease with you..... 49
50. You daydream a great deal..... 50
51. You are quick in your actions..... 51
52. You have a habit of starting things and then losing interest in them..... 52
53. When you were a child, many of your playmates naturally expected you to be the leader..... 53
54. You sometimes avoid social contacts for fear of doing or saying the wrong thing..... 54
55. You have frequent ups and downs in mood, sometimes with and sometimes without apparent cause.. 55
56. You always seem to have plenty of vigor and vitality..... 56
57. It is difficult for you to understand people who get very concerned about things..... 57
58. When a clerk in a store waits on others who should come after you, you call his attention to the fact.. 58
59. You would be very unhappy if you were prevented from making numerous social contacts..... 59
60. There are times when your future looks very dark..... 60
61. You sometimes wish that people would slow down a bit and give you a chance to catch up..... 61
62. Many of your friends think you take your work too seriously..... 62
63. You hesitate to walk into a meeting when you know that everyone's eyes will be upon you..... 63
64. You limit your friendships mostly to members of your own sex..... 64
65. You almost always feel well and strong..... 65
66. You seem to lack the drive necessary to get as much done as other people do..... 66
67. You make decisions on the spur of the moment..... 67
68. You are rather good at bluffing when you find yourself in difficulty..... 68
69. After being introduced to someone, you just cannot think of things to say to make good conversation..... 69
70. You feel lonesome even when with other people..... 70
71. You are able to work for unusually long hours without feeling tired..... 71
72. You often act on the first thought that comes into your head..... 72
73. At the scene of an accident, you take an active part in helping out..... 73
74. You have difficulty in making new friends..... 74
75. Your mood often changes from happiness to sadness, or vice versa, without your knowing why..... 75
76. You talk more slowly than most people..... 76
77. You like to play practical jokes upon others..... 77
78. You take the lead in putting life into a dull party..... 78
79. You would like to belong to as many clubs and social organizations as possible..... 79
80. There are times when your mind seems to work very slowly and other times when it works very rapidly..... 80
81. You like to do things slowly and deliberately..... 81
82. You are a happy-go-lucky individual..... 82
83. When you are served stale or inferior food in a restaurant, you say nothing about it..... 83
84. You would rather apply for a job by writing a letter than by going through with a personal interview.. 84
85. You are often in low spirits..... 85
86. You are inclined to rush from one activity to another without pausing enough for rest..... 86
87. You are so concerned about the future that you do not get as much fun out of the present as you might..... 87
88. When you are attracted to a person whom you have not met, you make an active attempt to get acquainted even though it may be quite difficult..... 88
89. You are inclined to limit your acquaintances to a select few..... 89
90. You seldom give your past mistakes a second thought..... 90

91. You are less energetic than many people you know 91
92. You often stop to analyze your thoughts and feelings 92
93. You speak out in meetings to oppose those who you feel sure are wrong 93
94. You are so shy it bothers you 94
95. You are sometimes bothered by having a useless thought come into your mind over and over 95
96. You get things done in a hurry 96
97. It is difficult for you to understand how some people can be so unconcerned about the future 97
98. You like to sell things (that is, to act as a salesman) 98
99. You are often the "life of the party" 99
100. You find daydreaming very enjoyable 100
101. At work or at play other people find it hard to keep up with the pace you set 101
102. You can listen to a lecture without feeling restless 102
103. You would rather work for a good boss than for yourself 103
104. You can express yourself more easily in speech than in writing 104
105. You keep in fairly uniform spirits 105
106. You dislike to be hurried in your work 106
107. You sometimes find yourself "crossing bridges before you come to them" 107
108. You find it somewhat difficult to say "no" to a salesman who tries to sell you something you do not really want 108
109. There are only a few friends with whom you can relax and have a good time 109
110. You usually keep cheerful in spite of trouble 110
111. People sometimes tell you to "slow down" or "take it easy" 111
112. You are one of those who drink or smoke more than they know they should 112
113. When you think you recognize someone you see in a public place, you ask him whether you have met him before 113
114. You prefer to work alone 114
115. Disappointments affect you so little that you seldom think about them twice 115
116. You are slow and deliberate in movement 116
117. You like wild enthusiasm, sometimes to a point bordering on rowdyism, at a football or baseball game 117
118. You feel self-conscious in the presence of important people 118
119. People think of you as being a very social type of person 119
120. You have often lost sleep over your worries 120
121. You can turn out a large amount of work in a short time 121
122. You keep at a task until it is done, even after nearly everyone else has given up 122
123. You can think of a good excuse when you need one 123
124. Other people say that it is difficult to get to know you well 124
125. Your daydreams are often about things that can never come true 125
126. You often run upstairs taking two steps at a time 126
127. You seldom let your responsibilities interfere with your having a good time 127
128. You would like to take on important responsibilities such as organizing a new business 128
129. You have hesitated to make or to accept "dates" because of shyness 129
130. Your mood is very easily influenced by people around you 130
131. Others are often amazed by the amount of work you turn out 131
132. You generally feel as though you haven't a care in the world 132
133. You find it difficult to get rid of a salesman to whom you do not care to listen or give your time 133
134. You are a listener rather than a talker in social conversations 134
135. You almost always feel that life is very much worth living 135

136. It irritates you to have to wait at a crossing tor a long freight train to pass..... 136
137. You usually say what you feel like saying at the moment..... 137
138. You like to speak in public..... 138
139. You like to be with people..... 139
140. You generally keep cool and think clearly in exciting situations..... 140
141. Other people regard you as a lively individual..... 141
142. When you get angry, if you let yourself go you feel better..... 142
143. You seek to avoid all trouble with other people..... 143
144. People seem to enjoy being with you..... 144
145. You sometimes feel listless and tired for no good reason..... 145
146. It is hard to understand why many people are so slow and get so little done..... 146
147. You are fond of betting on horse races and games, whether you can afford it or not..... 147
148. If someone you know has been spreading untrue and bad stories about you, you see him as soon as possible and have a talk about it..... 148
149. Shyness keeps you from being as popular as you should be..... 149
150. You are generally free from worry about possible misfortunes..... 150
151. You nearly always receive all the credit that is coming to you for things you do..... 151
152. You would like to tell certain people a thing or two..... 152
153. You would rather spend an evening reading at home than to attend a large party..... 153
154. You would change a lot of things about human nature if you could have your way about it..... 154
155. You would like to go hunting with a rifle for wild game..... 155
156. In group activities you get your full share of everything..... 156
157. In most cases it is important to get what you want even if you have to fight to get it..... 157
158. You often try to analyze the motives of others..... 158
159. Most public office holders generally put public interests ahead of their own..... 159
160. The sight of blood frightens you..... *160*
161. People talk about you behind your back..... 161
162. Money is important mostly because it gives its owner power..... 162
163. It is easy for you to act naturally wherever you are..... 163
164. Most people are stupid..... 164
165. You feel deeply sorry for a bird with a broken wing..... 165
166. Other people often blame you for things you didn't do..... 166
167. You hate to lose in a contest..... 167
168. You like a job that requires attention to many details..... 168
169. Most people fulfill their duties even when not being watched..... 169
170. You can look at snakes without shuddering..... 170
171. You often become bored when the subject of conversation shifts away from your own experience, hobbies, or interests..... 171
172. You hate to lose an argument even when the issue is not very important..... 172
173. You are usually too busy to spend time in reflective thought..... 173
174. Most people know what to do without being told..... 174
175. When a parent, teacher, or boss scolds you, you feel like weeping..... 175
176. You are touchy about some things..... 176
177. You know someone whom you would particularly like to see "put in his (or her) place"..... 177
178. You are more interested in athletics than in intellectual things..... 178
179. Most people are paid as well as they should be for what they contribute to society..... 179
180. The idea of finding a bug or a worm crawling on you makes you shudder..... 180
181. You often feel that one of the main characters in a movie or a play is like you..... 181
182. You hesitate to tell people to mind their own business..... 182

183. You make it a policy to evaluate your past actions carefully..... 183
184. In most places the traffic laws are in great need of improvement..... 184
185. You would rather study mathematics and science than literature and music..... 185
186. You get into scrapes which you did not seek to stir up..... 186
187. You resent having friends or members of your family give you orders..... 187
188. You are philosophically inclined, that is, inclined to philosophize about things..... 188
189. Most people keep to the "straight and narrow path" only because of the fear of being caught..... 189
190. You especially dislike to get your hands dirty or greasy..... 190
191. You are inclined to think about yourself much of the time..... 191
192. You have frequently felt like telling "nosey" people to mind their own business..... 192
193. You are frequently "lost in thought"..... 193
194. Far too many people try to take as much as they can and give as little as possible back to society.... 194
195. You like to read true stories about love and romance..... 195
196. You get over a humilating experience very quickly..... 196
197. In group undertakings you almost always feel that your own plans are best..... 197
198. You like to discuss the more serious questions of life with your friends..... 198
199. Most people today try to do an honest day's work for a day's pay..... 199
200. You pay little attention to styles in clothing..... 200
201. Almost everything that happens seems to have some relationship to you..... 201
202. When people become bossy or domineering, you want to do the opposite of everything they tell you to do..... 202
203. You often would like to know the underlying reasons behind the actions of other people..... 203
204. There are far too many useless laws which hamper an individual's personal freedom..... 204
205. You would rather be a forest ranger than a dress designer..... 205
206. Certain people deliberately say or do things to annoy you..... 206
207. Some people become so rude that you feel the urge to "sit on them" or to "tell them off"..... 207
208. You sometimes have a peculiar feeling that you are not your old self..... 208
209. Most people who get ahead today do so because they have "pull"..... 209
210. The sound of foul language disgusts you..... 210
211. There are many kinds of work that you would not think of doing because they are not good enough for you..... 211
212. You get into fights or arguments in defense of your friends or members of your family..... 212
213. You enjoy thinking out complicated problems..... 213
214. Most people learn quickly to avoid making the same mistake twice..... 214
215. You are only mildly disturbed when you see or hear of animals being treated cruelly..... 215
216. People offend you without knowing it because you hide your feelings from them..... 216
217. You get a lot of satisfaction from making other people do as you want them to..... 217
218. You often take time out just to meditate about things..... 218
219. You have received about all the rewards in life that you deserve..... 219
220. You would rather be an interior decorator than an architectural engineer..... 220
221. You have felt that certain persons are secretly trying to get the better of you..... 221
222. You are likely to talk back to a policeman or other person in authority over you if you feel like it.... 222
223. You find it very interesting to watch people to see what they will do..... 223
224. The number of "two-faced" individuals you have known is actually very small..... 224
225. You feel very badly if someone does not approve of what you are wearing..... 225
226. You very often seek the advice of other people..... 226
227. When someone is not playing fair, you like to see him beaten at his own game..... 227
228. You are constantly alert to ways of improving yourself..... 228
229. Most groups of people behave like a bunch of sheep, that is, they blindly follow a leader..... 229

230. You would rather go to an athletic event than to a dance 230
231. It is difficult to hurt your feelings 231
232. Anyone trying to take away any of your lawful rights will have a real fight on his hands with you personally 232
233. You are inclined to steer clear of complicated problems that call for thinking 233
234. In general, people higher up tend to assume their share of the dirty work, not leaving it for others to do 234
235. The sight of ragged or soiled fingernails is repulsive to you 235
236. There have been times when you have been bothered by the idea that someone is reading your thoughts 236
237. It pays to "turn the other cheek" rather than to start a fight 237
238. You try to sense what people are thinking about as they talk to you 238
239. You have had your share of good luck 239
240. You feel deeply sorry for a mistreated horse 240
241. You have been seriously slighted more than once 241
242. When you resent the actions of anyone, you promptly tell him so 242
243. After a critical moment is over, you usually think of something you should have done but didn't do 243
244. If you want a thing done right, you must do it yourself 244
245. You can handle a loaded gun without feeling at all jittery 245
246. Other people too often take the credit for things you yourself have done 246
247. You know or have known someone personally whom you would like to see behind prison bars 247
248. You are much concerned over the morals of your generation 248
249. Large business corporations are a good thing 249
250. You cry rather easily 250
251. When things go wrong, it upsets you very little 251
252. You see to it that people do not take advantage of you 252
253. You are inclined to ponder over your past 253
254. Some people pay more attention to your comings and goings than they should 254
255. The sight of large bugs and spiders gives you a "creepy" feeling 255
256. You often feel that a speaker is talking about you personally 256
257. You are unhappy unless things in an organization go pretty much as you want them to 257
258. You enjoy analyzing your own thoughts and feelings 258
259. Most people use politeness to cover up what is really "cut-throat" competition 259
260. You would rather be a building contractor than a nurse 260
261. You have days in which it seems that everything goes wrong 261
262. You feel the urge to stir up some excitement when things become dull 262
263. You would rather put plans into action than to spend time working them out 263
264. The educational system in this country is all right in most ways 264
265. You feel sorry for a fish that is caught on a hook 265
266. You often unburden your troubles to others 266
267. You would like to have enough money or power in order to impress people who think they are better than you are 267
268. You frequently find yourself in a meditative state 268
269. People today have just about as many chances for success as in your parents' day 269
270. You feel strongly against kissing a friend of your own sex and age 270
271. You are too sensitive for your own good 271
272. You have often found it necessary to fight for what you believe to be right 272
273. You often watch others to see what effects your words or actions have upon them 273

274. Most people are out to get more than they give..... 274
275. You are willing to take a chance alone in a situation where the outcome is doubtful..... 275
276. People have criticized you unjustly to others..... 276
277. The opinions of most people are worthless..... 277
278. You are inclined to be introspective, that is, to analyze yourself..... 278
279. Almost anyone, even though poor, can get a square deal in courts of law..... 279
280. You would rather be a miner than a florist..... 280
281. It is difficult for you to become interested in the problems of others when you have so many of your own..... 281
282. It bothers you to have other people tell you what you should do..... 282
283. You often wonder about why human life exists and what its future is..... 283
284. Some people deliberately make things hard for you..... 284
285. Odors of perspiration disgust you..... 285
286. Criticism disturbs you very little..... 286
287. It bothers you to see someone else bungling a job that you know perfectly well how to manage ... 287
288. You are inclined to live in the present, leaving the past and the future out of your thoughts..... 288
289. Most people will tell a lie now and then in order to get ahead..... 289
290. The sight of an unshaven man disgusts you..... 290
291. When you lose something you often begin to suspect someone of either having taken it or having misplaced it..... 291
292. There are some people whose actions seem continually to irritate you..... 292
293. You like to have time to be alone with your thoughts..... 293
294. There are entirely too many employees who deserve higher pay than their bosses..... 294
295. You like love scenes in a movie or play..... 295
296. There are times when it seems that everyone is against you..... 296
297. If anyone steps ahead of you in line, he is likely to hear from you about it..... 297
298. You often wonder why people behave as they do..... 298
299. Nearly all people try to do the right thing when given a chance..... 299
300. When you become emotional you come to the point of tears..... 300

BE SURE YOU HAVE ANSWERED EVERY ITEM

PROFILE CHART FOR THE GUILFORD-ZIMMERMAN TEMPERAMENT SURVEY

For high-school, college, and adult ages

Name _____ Last _____ First _____ Middle _____ Date _____ Comment _____

C SCORE	G General Activity Energy	R Restraint Seriousness	A Ascendance Social Boldness M F	S Social Interest Sociability	E Emotional Stability	O Objectivity	F Friendliness Agreeableness M F	T Thoughtfulness Reflectiveness	P Personal Relations Cooperativeness	M Masculinity Femininity M F	CENTILE RANK	NEAREST T SCORE
10	30 29 28	30 29 28 27	30 30 29 29 28 28 28 27	30	30 29	30 29	30 30 28 29 26 28	30 29 28	30 29	30 0 29 1	99	75
9	27 26	26 25	27 26 25 26 24	29	28 27	28 27	25 27 24 26	27 26	28 27	28 2 27 3		70
8	25 24	24 23	25 23 22 24 21	28 27	26 25	26 25	23 25 22 21 24	25 24	26 25	26 4 25 5	95 90	65
7	23 22	22 21	23 20 22 21 19	26 25	24 23	24 23	20 23 22 19 21	23 22	24 23	6 24 7	80	60
6	21 20	20 19 18	20 18 19 17 18 16	24 23 22	22 21 20	22 21 20	18 20 17 19 16 18	21 20	22 21 20	23 8 22 9	70	55
5	19 18 17	17 16 15	17 15 16 14 15 13	21 20 19	19 18 17	19 18 17	15 17 14 16 13 15	19 18 17	19 18 17	21 10 20 11	60 50	50
4	16 15 14	14 13 12	14 12 13 12 11	18 17 16 15	16 15 14 13	16 15 14	12 14 11 13 10 12	16 15 14	16 15 14	19 12 18 13	40 30	45
3	13 12 11	11 10	11 10 9 10 8	14 13 12 11	12 11 10 9	13 12 11 10	9 11 8 10 7 9	13 12 11	13 12	17 14 16 15 15	20	40
2	10 9 8	9 8 7	9 7 8 7 6	10 9 8 7	8 7 6	9 8 7	6 8 5 7	10 9 8	11 10 9	14 16 13 17 12 18	10 5	35
1	7 6	6 5	6 5 4 5 3	6 5 4	5 4	6 5	4 6 3 5	7 6 5	8 7 6	11 19 10 9 20		30
0	5 3 2 1	4 3 2 1	4 2 3 1 2 1 0	3 2 1 0	3 2 1	4 3 2 1	2 4 1 3 2 0 1	4 3 2 1	5 3 1	8 21 5 23 2 25	1	25
	Inactivity Slowness	Impulsiveness Rhathymia	Submissiveness M F	Shyness Seclusiveness	Emotional Instability Depression	Subjectivity Hypersensitiveness	Hostility Belligerence M F	Unreflectiveness	Criticalness Intolerance	Femininity Masculinity M F		

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G-Z SURVEY OF OPINIONS OR G-Z TEMP. SURVEY

NAME _____ LAST _____ FIRST _____ MIDDLE _____ AGE _____ SEX _____

DATE _____ YOUR GROUP _____

GRADE

1 Yes ? No	2 Yes ? No	3 Yes ? No	4 Yes ? No	5 Yes ? No
6 Yes ? No	7 Yes ? No	8 Yes ? No	9 Yes ? No	10 Yes ? No
11 Yes ? No	12 Yes ? No	13 Yes ? No	14 Yes ? No	15 Yes ? No
16 Yes ? No	17 Yes ? No	18 Yes ? No	19 Yes ? No	20 Yes ? No
21 Yes ? No	22 Yes ? No	23 Yes ? No	24 Yes ? No	25 Yes ? No
26 Yes ? No	27 Yes ? No	28 Yes ? No	29 Yes ? No	30 Yes ? No
31 Yes ? No	32 Yes ? No	33 Yes ? No	34 Yes ? No	35 Yes ? No
36 Yes ? No	37 Yes ? No	38 Yes ? No	39 Yes ? No	40 Yes ? No
41 Yes ? No	42 Yes ? No	43 Yes ? No	44 Yes ? No	45 Yes ? No
46 Yes ? No	47 Yes ? No	48 Yes ? No	49 Yes ? No	50 Yes ? No
51 Yes ? No	52 Yes ? No	53 Yes ? No	54 Yes ? No	55 Yes ? No
56 Yes ? No	57 Yes ? No	58 Yes ? No	59 Yes ? No	60 Yes ? No
61 Yes ? No	62 Yes ? No	63 Yes ? No	64 Yes ? No	65 Yes ? No
66 Yes ? No	67 Yes ? No	68 Yes ? No	69 Yes ? No	70 Yes ? No
71 Yes ? No	72 Yes ? No	73 Yes ? No	74 Yes ? No	75 Yes ? No

BE SURE YOUR MARKS ARE HEAVY AND BLACK.
ERASE COMPLETELY ANY ANSWER YOU WISH TO CHANGE.

76 Yes ? No	77 Yes ? No	78 Yes ? No	79 Yes ? No	80 Yes ? No
81 Yes ? No	82 Yes ? No	83 Yes ? No	84 Yes ? No	85 Yes ? No
86 Yes ? No	87 Yes ? No	88 Yes ? No	89 Yes ? No	90 Yes ? No
91 Yes ? No	92 Yes ? No	93 Yes ? No	94 Yes ? No	95 Yes ? No
96 Yes ? No	97 Yes ? No	98 Yes ? No	99 Yes ? No	100 Yes ? No
101 Yes ? No	102 Yes ? No	103 Yes ? No	104 Yes ? No	105 Yes ? No
106 Yes ? No	107 Yes ? No	108 Yes ? No	109 Yes ? No	110 Yes ? No
111 Yes ? No	112 Yes ? No	113 Yes ? No	114 Yes ? No	115 Yes ? No
116 Yes ? No	117 Yes ? No	118 Yes ? No	119 Yes ? No	120 Yes ? No
121 Yes ? No	122 Yes ? No	123 Yes ? No	124 Yes ? No	125 Yes ? No
126 Yes ? No	127 Yes ? No	128 Yes ? No	129 Yes ? No	130 Yes ? No
131 Yes ? No	132 Yes ? No	133 Yes ? No	134 Yes ? No	135 Yes ? No
136 Yes ? No	137 Yes ? No	138 Yes ? No	139 Yes ? No	140 Yes ? No
141 Yes ? No	142 Yes ? No	143 Yes ? No	144 Yes ? No	145 Yes ? No
146 Yes ? No	147 Yes ? No	148 Yes ? No	149 Yes ? No	150 Yes ? No

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Continue on the back

151 Yes ? No	152 Yes ? No	153 Yes ? No	154 Yes ? No	155 Yes ? No
156 Yes ? No	157 Yes ? No	158 Yes ? No	159 Yes ? No	160 Yes ? No
161 Yes ? No	162 Yes ? No	163 Yes ? No	164 Yes ? No	165 Yes ? No
166 Yes ? No	167 Yes ? No	168 Yes ? No	169 Yes ? No	170 Yes ? No
171 Yes ? No	172 Yes ? No	173 Yes ? No	174 Yes ? No	175 Yes ? No
176 Yes ? No	177 Yes ? No	178 Yes ? No	179 Yes ? No	180 Yes ? No
181 Yes ? No	182 Yes ? No	183 Yes ? No	184 Yes ? No	185 Yes ? No
186 Yes ? No	187 Yes ? No	188 Yes ? No	189 Yes ? No	190 Yes ? No
191 Yes ? No	192 Yes ? No	193 Yes ? No	194 Yes ? No	195 Yes ? No
196 Yes ? No	197 Yes ? No	198 Yes ? No	199 Yes ? No	200 Yes ? No
201 Yes ? No	202 Yes ? No	203 Yes ? No	204 Yes ? No	205 Yes ? No
206 Yes ? No	207 Yes ? No	208 Yes ? No	209 Yes ? No	210 Yes ? No
211 Yes ? No	212 Yes ? No	213 Yes ? No	214 Yes ? No	215 Yes ? No
216 Yes ? No	217 Yes ? No	218 Yes ? No	219 Yes ? No	220 Yes ? No
221 Yes ? No	222 Yes ? No	223 Yes ? No	224 Yes ? No	225 Yes ? No

BE SURE YOUR MARKS ARE HEAVY AND BLACK.
ERASE COMPLETELY ANY ANSWER YOU WISH TO CHANGE.

226 Yes ? No	227 Yes ? No	228 Yes ? No	229 Yes ? No	230 Yes ? No
231 Yes ? No	232 Yes ? No	233 Yes ? No	234 Yes ? No	235 Yes ? No
236 Yes ? No	237 Yes ? No	238 Yes ? No	239 Yes ? No	240 Yes ? No
241 Yes ? No	242 Yes ? No	243 Yes ? No	244 Yes ? No	245 Yes ? No
246 Yes ? No	247 Yes ? No	248 Yes ? No	249 Yes ? No	250 Yes ? No
251 Yes ? No	252 Yes ? No	253 Yes ? No	254 Yes ? No	255 Yes ? No
256 Yes ? No	257 Yes ? No	258 Yes ? No	259 Yes ? No	260 Yes ? No
261 Yes ? No	262 Yes ? No	263 Yes ? No	264 Yes ? No	265 Yes ? No
266 Yes ? No	267 Yes ? No	268 Yes ? No	269 Yes ? No	270 Yes ? No
271 Yes ? No	272 Yes ? No	273 Yes ? No	274 Yes ? No	275 Yes ? No
276 Yes ? No	277 Yes ? No	278 Yes ? No	279 Yes ? No	280 Yes ? No
281 Yes ? No	282 Yes ? No	283 Yes ? No	284 Yes ? No	285 Yes ? No
286 Yes ? No	287 Yes ? No	288 Yes ? No	289 Yes ? No	290 Yes ? No
291 Yes ? No	292 Yes ? No	293 Yes ? No	294 Yes ? No	295 Yes ? No
296 Yes ? No	297 Yes ? No	298 Yes ? No	299 Yes ? No	300 Yes ? No

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