

WILHELM WUNDT'S HIGH SCHOOL YEARS: A REASSESSMENT

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As the "senior psychologist in the history of psychology" and the "founder of experimental psychology" (BORING, 1950, p. 316), Wilhelm WUNDT (1832-1920) has captured the attention of psychology's historians. English-language scholars in the field have been particularly intrigued with WUNDT's childhood and school years (BRINGMANN, BALANCE & EVANS, 1975; BRUNO, 1972; DIAMOND, 1973; MILLER, 1962; MISIAK & SEXTON, 1966; WATSON, 1963; WERTHEIMER, 1970). An examination of many of these studies reveals a strong tendency among scholars to link WUNDT's prodigious output as a scholar to excessively compulsive work habits in his formative years. The beginning of such interpretations can clearly be traced to BORING's original account of WUNDT's high school (1950):

When the boy was thirteen, he entered the *Gymnasium* at *Bruschal* (sic), a school in which the Catholic influence predominated. Partly for this latter reason his parents decided to send him elsewhere, and he went the next year to the *Gymnasium* at Heidelberg. Here he made friends, developed a habit of intensive reading and in general, entered upon the life of learning in which he was to become so distinguished. He was ready for the university when he was nineteen (p. 317).

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BORING next proceeded to draw a connection between WUNDT's early life and his adult personality and accomplishments (1950):

Certainly this was a sober childhood and a serious youth, unrelieved by fun and jollity, which prepared the young Wundt for the endless writing of the ponderous tomes which eventually did so much to give him his place in history. He never learned to play. He had no friends in childhood and only intellectual companions in adolescence...One can see the future man being formed -the humorless, indefatigable, aggressive Wundt (p. 317).

BORING admitted grudgingly that WUNDT possessed "tremendous ability, enough to account for his encyclopedic erudition" (1950, p. 317) but he clearly identified its origins with childhood pathology (1950):

It was, however, this motivational pattern which made him presently the psychologist most to be reckoned with, a pattern we see already well formed before Wundt had even arrived at his university training (p. 317).

BORING's account and conclusions have been repeated and elaborated upon by numerous other scholars. For example, George A. MILLER stated with finality in his *Introductory Textbook* (1962):

There is no record of any other boyhood friends, no foolish pranks or young adventurers, no boisterous laughter or silly giggle -only study, reading, work, and study. So far as one can tell, he was a humorless, indefatigable scholar from the day of his birth (p. 15).

More generous than BORING (1950, p. 743), MILLER acknowledged that WUNDT was "a genius...the kind Thomas Edison described -one per cent inspiration and ninety-nine per cent perspiration..." (1962, p. 24).

WUNDT, however, has given a radically different description of his youth in several chapters of his autobiography, *Erlebtes und Erkanntes* (1920, pp. 1-13, 30-57). As far as his education in high school was concerned, he made it quite clear that he was regarded by his parents, his teachers, and even himself for some time, as an academic misfit who was doomed to fail in later life. In fact WUNDT did fail his first year in high school at the Bruchsal Gymnasium in 1845, probably because of inadequate preparation, serious family problems, and a tendency to daydream excessively. At that time a "well-meaning" teacher (WUNDT, 1920) even advised him publicly that he should consider becoming a mail carrier and surrender hopes of a university education. Even after WUNDT successfully repeated the fourth grade (Quarta) at another high school in nearby Heidelberg and went on to graduate in the summer of 1851 without further difficulties, he was, according to his own characterization, only an "average" student (WUNDT, 1920, p. 41) who had demonstrated "little industry" in school (p. 72).

In this paper we have attempted to assess the validity of these conflicting accounts of WUNDT's life. In order to minimize the obvious bias found in the traditional autobiographical and biographical sources, we have elected to emphasize three types

of information that do not seem to have been used by WUNDT scholars before.

The first (and in our opinion most important) independent source of information about WUNDT's school years are the programs that were printed by his high school for the relevant years (1845-1851). WUNDT's *alma mater* and many other public institutions in Germany during the 19th century utilized such reports as a means of informing parents, the public at large, and the respective ministries of education of each school's activities and accomplishments during a given year. The reports were usually authored by the principal or a senior faculty member and covered the following subject matter:

- 1.- Major events in the school during the previous year,
- 2.- enrollment statistics,
- 3.- an up-to-date list of teachers,
- 4.- detailed syllabi of subject matter covered in each grade,
- 5.- a chronicle of public examinations, and
- 6.- a list of students for each grade.

Brief histories of his high school written by two of his teachers represent a second source of information about WUNDT's school years in Heidelberg. The earlier history by HAUTZ was published in 1847 in honor of the celebration commemorating the tricentennial of WUNDT's high school, the Heidelberg Lyceum. More recent information is contained in a second small booklet by another of WUNDT's teachers (CADENBACH, 1859), who devoted about 40 pages to information about the years during which WUNDT was a student at Heidelberg. A collection of laws concerning "*The Higher and Lower Educational System in the Grand-Duchy of Badem*" by MECK (1846) was also very useful. Extensive use was also made of the standard geographical and political handbooks for Badem from that time (HEUNISCH, 1833, 1857).

Finally, previously unpublished documentary information about WUNDT's education was discovered by the senior author in the Archive of the *Kurfürst Friedrich Gymnasium* in Heidelberg. This modern institution is the lineal descendent of WUNDT's own school. These archival materials included the master grade record -a heavy tome-containing the grades of Wilhelm WUNDT (VERZEICHNIS, 1845-1851).

THE HEIDELBERG LYCEUM

In his autobiography WUNDT referred to his old high school as the "...old Heidelberg Gymnasium..." (WUNDT, 1920, p. 42). Actually, during the years of his association with this institution, it was formally designated as the "Grand-Ducal Lyceum in Heidelberg" (HAUTZ, 1847). WUNDT obviously used a term which would have been more familiar to his readers in 1920 than the old-fashioned name "Lyceum" which means a grammar school emphasizing the classics. Both names were utilized alternatively in the Badem of WUNDT's time. A "*Gymnasium*", like the one WUNDT had attended for only one year in Bruchsal (WUNDT, 1920, 39-41), was similar to a junior high school. It did not offer the crucial final years required to prepare a student for admission to most German universities (PAULSEN, 1906). A "*Lyceum*" on the other hand -named in honor of the school and research center established by ARISTOTLE in Athens- provided all nine of the required grades. Furthermore, it was empowered to conduct the famous school-leaving examination or *Abitur* which certified a student's

suitability for university study. The *Heidelberg Lyceum* was one of only four such institutions in Baden. It had been upgraded to the position of a comprehensive high school only in 1837 (CADENBACH, 1859).

FACILITIES

The Heidelberg Lyceum consisted only of the single ancient Jesuit School building when WUNDT began his studies (CADENBACH, 1859). He finished his education in the newly constructed annex, which housed the classes for the upper two grades, the principal's office, a Spartan collection of instructional equipment and an assembly hall. The teachers' library, which contained about 1,800 volumes (including many old and valuable books), has survived to the present. The student library, an innovation for the time, was stocked with donations from the community, and its 500 books may not have been of the highest quality.

ADMINISTRATION AND TEACHERS

The Heidelberg Lyceum was administered by a board consisting of two city officials, a representative of Heidelberg University and, on an alternating annual basis, either the Roman Catholic or the Protestant co-principals. Between 1845 and 1851 the faculty included the following male teachers (in alphabetical order): A.A. ARNETH, J.G. BEHAGHEL, K.A. CADENBACH, F.S. FELDBAUSCH, J.R. HAUTZ, B. JÜLG, J.A. LEBER, K. RIEGEL, S. REINHOLD, G.L. SÜPFLE, and H.F. WILHELMI.

CURRICULUM

The Lyceum, like other institutions of higher learning in Baden, taught a standized curriculum which had been obligatory from 1837 (CADENBACH, 1859). The required subjects included Religion, German, Latin, Greek, Hebrew (for future theologians), French, Mathematics, Geography, Natural History, Natural Science, Philosophy, Penmanship, Music, Drawing and Gymnastics. English was offered occasionally on an elective basis.

The first three years of the nine-year program were taught by the so-called "class teacher system", in which one teacher taught most, if not all, subjects for the lower grades. The same teacher would usually stay with the same group of students for the first years. Beginning with the fourth or fifth grade, however, specialists in different subjects took over the more advanced instruction. In general, the curriculum was heavily slanted towards the classical languages, which occupied from 40 to 60 per cent of the total instruction during WUNDT's time. Mathematics and the natural sciences comprised only about 10 to 15 per cent of the class time over the nine-year period.

The school year began on October 1 and ended in the middle of the following August. Students were granted eight vacation days at Christmas, two weeks at Easter and about six weeks of summer vacation from the middle of August until the end of September.

EXAMINATIONS

Students were subjected to both oral and written examinations and burdened with homework, about which they were quizzed daily. Seats were usually assigned on

the basis of classroom performance. Thus, it was possible for a student to be promoted or demoted daily in almost all subjects. Overall ranks were computed for each quarter of the school year. Until 1847 the printed annual reports listed the members of each grade according to their academic rank.

Two formal examinations were scheduled annually. Each students had to take an "in-house" examination, which was conducted jointly by the principal and the major teacher for the next grade, around Easter. Beginning students and those transferring from other schools were also tested at that time for Fall admission. Important decisions about promotion would also be made. Students, of course, had the opportunity to raise their grades before the public examination at the end of the school year around the middle of August. This examination, which lasted an entire week, was usually presided over by an official the State Ministry of Education. Vital decisions about one's academic future, however, were made during the preliminary tests in the spring.

Unlike American students who must complete a set number of courses in high school in order to graduate, German students in WUNDT's time (and with some modifications even today) were required to pass a special final examination at the end of their entire high school education. This *Abitur* or maturity examinations, was held on two successive days in mid-August at the Heidelberg Lyceum. It consisted of lengthy written essays in German and Latin, translations from Latin and Greek into German and a brief translation from German into Greek. The specific assignments came from a longer list of topics, which the faculties of each Lyceum submitted to their superiors each year and from which the particular assignments were chosen. Only students who unexpectedly performed poorly in their written work were required to take the oral part of the *Abitur*. A final conference of all teachers was then required to decide if a particular student had performed well enough on the school-leaving examination to be given the certificate of graduation, which qualified him for admission to almost any German university.

ADMISSION

Wilhelm WUNDT was formally enrolled at the Heidelberg Lyceum on October 13, 1845, by Dr. Sebastian FELDBAUSCH, the officiating Catholic principal of the school. He had to submit a copy of his birth certificate, evidence of vaccination, and a "certificate of morals" from his last place of residence. A library fee of "one Gulden, twenty-one Crowns" plus "12 Gulden" for tuition for the first part of the school year was assessed (GESETZE, 1847).

WUNDT was admitted to the "Lower Fourth grade". The enrollment list and grade ledger at the *Kurfürst Friedrich Gymnasium* in Heidelberg contains the following information (VERZEICHNIS, 1845-1851):

Name of Student:	Wilhelm Wundt.
Birthdate:	August 16, 1832.
Place of Birth:	Neckarau.
Religion.	Ev. Prot.

Date of Admission:	October 13, 1845.
Name, Class and Residence of	
Parents:	Max Wundt, Minister in Heidelberg.
Promotion and Departure:	Promoted to:
	Upper Fourth, Fall 1846.
	Lower Fifth, Fall 1847.
	Upper Fifth, Fall 1848.
	Lower Sixth, Fall 1849.
	Upper Sixth, Fall 1850.
	Discharged to University, Fall 1851.

The information about religion refutes the popular claim that WUNDT was the son of a Lutheran clergyman. The abbreviation "Ev." stands for "evangelisch" or evangelical. In combination with the abbreviation "Prot." or "Protestant", evidence is given as to WUNDT's membership in the established Church of Baden. More than ten years before WUNDT's birth, a government decree had established this organization through a compulsory union of the Calvinist (Reformed) and Lutheran denominations (BRINGMANN, 1975).

When WUNDT became a student of the Heidelberg Lyceum his father was the incumbent clergyman of the Heidelberg congregation, although severe illness had kept him from performing his duties for some time (BRINGMANN, BRINGMANN & UNGERER, 1980). In later class lists the father's name is followed by a small cross, signifying that he was deceased.

CLASSMATES

The printed class lists of the Heidelberg Lyceum indicate an enrollment of 23 male students in the "Lower Fourth" grade during the 1845-1846 school year. One student dropped out during the year, and two others failed to be promoted.

The fathers of WUNDT's classmates included three physicians, three ministers, one university professor, two teachers, a high-ranking civil servant, and a university-educated forester. There was only a sprinkling of merchants and skilled tradesmen among the fathers. The presence of one French and one English student gave the group a mildly international flavor.

The entire school had an enrollment of only 170 students in the fall of 1845. Ten of these dropped out in the course of the school year for a variety of reasons. The remaining students included 100 Protestants, 56 Roman Catholics and four Jews. Approximately a third of the entire student body were from out of town and commuted to Heidelberg or boarded with local families.

SCHOOL REGULATIONS

The school regulations, which became effective shortly after WUNDT became a student at the Heidelberg Lyceum (GESETZE, 1847), give one an idea of the overall

atmosphere of a nineteenth-century high school. There are twenty lengthy paragraphs and a special appendix focusing on admission procedures. Acceptable behavior, for example, included: obedience, good behavior, regular church attendance, avoidance of public dances and smoking, abstinence from drinking and gambling, and a stricture against public and private dueling. The students were also urged to avoid all sports and gymnastics, other than those sponsored by the school, since such leisure activities were regarded as the first step towards the development of political and social radicalism. The use of firearms and gunpowder was forbidden!

SCHOOL RECORDS

WUNDT's academic performance at the Heidelberg Lyceum between 1845 and 1851 has been summarized in TABLE I. All information was obtained from the master grade ledger found in Heidelberg by the senior author (Grade Record, 1845-1851). Grades were apparently reported three times per year: after Christmas, before Easter and at the end of the school year in August.

WUNDT's grades were recorded by the German abbreviations for common adjectives denoting various grade levels. Although no complete key to these notations exists, we have tried to reduce speculation about the meaning of these grades by the use of comparable information from other schools of the period. Specifically, the following represents our translation of the German grade descriptions into American usage:

"g." ("gut") = A (good).

"zg." ("ziemlich gut") = B (almost good).

"ngg." ("nicht ganz gut") = C (not completely good).

"m." ("mittelmässig") = D (mediocre).

"schl." ("schlecht") = F (bad).

WUNDT's teachers also utilized question marks and the addition of minus and plus signs to indicate that a grade may have been somewhat higher or lower than its official label.

TABLE I includes WUNDT's grades for each of the three terms of a school year. Blank spaces mean that he did not enroll in that subject for that particular term or year. Unfortunately, despite all our efforts we were unable to find his grades for the 1849-1850 school year, although we know that he was enrolled in public school during the stressful period following the German Revolution of 1848-1849.

At the bottom of TABLE I, WUNDT's class ranks for each year are also recorded.

A GOOD OMEN

WUNDT's first year at the Heidelberg Lyceum (1845-1846) is described in greater detail than the remaining five years in order to highlight his academic improvement over the preceding year of failure at the Bruchsal Gymnasium (WUNDT, 1920).

According to the printed *Program of the Grand Ducal Lyceum at Heidelberg* (1845), WUNDT's brother Ludwig and cousin Ferdinand graduated from high school on September 12, 1845. We can assume that WUNDT attended his brother's graduation

TABLE I: SUMMARY OF WILHELM WUNDT'S HIGH SCHOOL GRADES
AT THE HEIDELBERG LYCEUM 1845-1851 (a)

SUBJECT	1845-46 LOWER FOURTH	1846-47 UPPER FOURTH	1847-48 LOWER FIFTH	1848-49 UPPER FIFTH	1850-51 UPPER SIXTH
TERM	123	123	123	123	123
CONDUCT	AAA	AAA	AAA	ACA	AAA
INDUSTRY	AAA	BAA	BAA	ABA	ABA
PROGRESS	AAA	BAA	BAA	ABB	AAB
ABILITY	AAA	AAA	AAA	AAA	AAA
RELIGION	BAA	BAA	AAA	AAA	AAB
GERMAN	DBB	BBB	B**	AAA	***
RHETORIC & HIST. OF GER.					
LITER.	***	***	***	***	AAA
LATIN	AAA	AAA	AAA	BBB	ABA
GREEK	AAA	AAA	BAB	AAA	ABA
FRENCH	DBB	BAA	AAA	ABB	AAB
HEBREW	***	***	AAA	AAA	A**
MATHEMATICS	DBA	DBB	BBB	DBD	***
HISTORY	AAA	AAA	ABA	AAA	BBB
SCIENCE	ABA	BBB	BBA	BBA	***
PHILOSOPHY	***	***	***	***	BBB
SINGING	**B	DD*	***	*D*	***
DRAWING	BBF	DBB	***	***	***
PHYSICS	***	***	***	***	ABB
RANK	1189	666	1169	689	355

(a) GRADES WERE NOT AVAILABLE 1849-50 SCHOOL YEAR.

(*) COURSE WAS NOT TAKEN DURING THE ACADEMIC YEAR.

together with his mother and other relatives and family friends living in Heidelberg. It is quite unlikely that the father came, because he had been seriously ill and bedridden for some time, following a cerebral stroke. The knowledge that two close relatives had successfully met the requirements of the Heidelberg Lyceum may well have been a good omen for WUNDT after his lonely failure at Bruchsal.

The grades for WUNDT's first year at the Heidelberg Lyceum can be found in the left column of TABLE I. An examination of the specific subjects reveals that he experienced initial difficulties in Religion, French, and Mathematics. For example, WUNDT received the grade of "B" in Religion when the typical grade for this very undemanding subject was an "A". The "D" in German suggests that he may have experienced some problems in adjusting to the more rigorous program in Heidelberg. He soon raised his grade to a "B", however. The initial grade of "D" in mathematics indicates another area which caused him considerable trouble. Some responsibility may well rest with the young minister, FRIEDRICH MÜLLER, who had tutored WUNDT some years earlier in his parent's home in Heidelberg. An examination of MÜLLER's high school diploma revealed that he had only minimal qualifications in mathematics and would have been unable to prepare the young WUNDT sufficiently in this area. It is noteworthy that WUNDT did, in fact, dramatically improve in mathematics (rising to an "A") by the end of the first year. His grade records also show that he was an excellent student in the classical languages from the beginning of his Heidelberg years. We may speculate that WUNDT's mature interest in the psychology of language and his outstanding publication record in the field (WUNDT, 1900) was originally stimulated by the heavy emphasis placed on languages and related subjects in his classical education.

WUNDT's improvement during the first year at Heidelberg is also reflected by the change in class rank (see TABLE I). He started the year in the middle of his class with the rank of 11 out of 22. During the spring term he moved to eighth place, and by the end of the year he had maintained an overall net gain of two ranks.

Despite such solid accomplishments, which must have pleased and relieved both his family and WUNDT himself, the year ended on a somber note. WUNDT's father, who had been ailing so long, died on July 3, 1846. He was buried at 6:00 p.m. the next day in the "Mountain Cemetery" (DITTENBERGER, 1974).

THE REMAINING YEARS 1846-1851

Generally WUNDT's remaining school years follow the pattern established during the first year with a few variations. Accordingly we shall summarize WUNDT's academic performance during the final five years at the Heidelberg Lyceum in one section by subject area.

Conduct. WUNDT received grades evaluating his "Conduct", "Industry", "Progress", and "Ability", throughout his Heidelberg school years. The first year, when he was still on probation, he received the grade of "A" in each area in all three terms. Considerable variability is noted for the remaining years. It should however, be remembered that most students received the mark of "A" as a matter of routine as long as their behavior was generally acceptable. A "B" in these behavior areas and certainly

a "C", as was the case for WUNDT in "Conduct" during the second term of the 1848-49 school year, suggests the existence of considerable problems. Of course at that very time Germany, and in particular, Baden and Heidelberg itself, were in the throes of violent political upheavals, and we know from WUNDT's autobiography that he and his classmates were vitally interested observers of these events (WUNDT, 1920, pp. 2-9).

Religion. The public schools of the Grand Duchy of Baden provided obligatory instruction in Religion for two hours per week. WUNDT's performance in this subject shows a fair amount of fluctuation. One might have expected a minister's son to be particularly outstanding in this field, but the record states on one occasion that he was "weak" in Religion. Since most students, who memorized assigned Bible verses and hymns for this subject would traditionally receive a grade of "A", WUNDT's variable performance in this subject may perhaps be interpreted as a sign of adolescent rebellion against society and the values represented by his father. On the other hand, WUNDT's instructor in Religion has been portrayed by KUSSMAUL (1899) as a dour pedant, who lacked a sense of humor and severely punished any resistance to his authority.

Languages. As can be seen in TABLE I, WUNDT's best performance throughout his high school years was in the classical and modern languages, in which he earned primarily "A"s and "B"s. An examination of the printed course syllabi for the entire period suggests a thorough training was received in both grammar and the translation of standard selections from classical authors into German. His exposure to philosophical writings in the classical languages was limited. He also seems to have gained a thorough training in Hebrew, and it is possible that he may have entertained the idea of studying theology (BRINGMANN, 1975), since Hebrew was ordinarily taken only by future theology students. He dropped the subject at the beginning of his senior year, and the records of that time contain the handwritten and underlined note "does not want to study theology" (VERZEICHNIS, 1845-1851).

WUNDT's school devoted relatively little time to instruction in his native German. An examination of various syllabi indicates an inordinate emphasis on grammar and the tedious analysis of poems and plays by classical German authors.

Another language which WUNDT studied thoroughly was French. This skill later enabled him to keep up with the scientific literature in French and also to communicate moderately well in that language (BRINGMANN, 1983). French was at that time the second language of the educated, especially in Baden, which owed its very existence to Napoleon.

Mathematics and Science. WUNDT's instruction in mathematics and the natural sciences was very restricted. His grades in mathematics, algebra, and geometry fluctuated considerably over the years and his last recorded grade, like his very first, was a "D". On the other hand, he did quite well in physics. Available records indicate that his teacher in these subjects, Dr. A.A. ARNETH (1802-1858) was a lecturer in mathematics at Heidelberg University, who had published extensively in the field of trigonometry and analytic geometry and was the author of a popular history of mathematics. ADOLF KUSSMAUL (1822-1902), who graduated from the Heidelberg Lyceum a few years before WUNDT, reports in his autobiography (1899) that ARNETH was considered a poor teacher in 1838, when he was a student. Only one student was able to fully

comprehend ARNETH, and he apparently received special tutoring. KUSSMAUL also complained about ARNETH's teaching of physics. He states that students ... "had no experiments, no equipment to see, only mathematical formulas at the blackboard" (1899, p. 71). At one time a group of students even tried to have ARNETH removed from the teaching staff of the Lyceum. However, their plot was discovered, and ARNETH maintained his position at the Lyceum until after WUNDT's time. WUNDT's major instruction in science was in biology. A few hours covered selected topics in mineralogy, botany, and zoology. Occasional excursions and classroom demonstrations were also included.

History. Geography and History were taught as one subject throughout the entire period. He learned a good deal about "Greek and Roman history", the "Middle Ages in Germany and France" and of course, the "Reformation". Recent historical events, however, were carefully omitted. WUNDT liked this class and did quite well in it.

Philosophy. In the tradition of his time, WUNDT received some superficial instruction in philosophy during his last two years in high school. This included a presentation of "psychology" during the 1849-1850 school year. While every student of psychology would doubtlessly be interested in the kind of grades "the founder of experimental psychology" received in this subject, this information was missing. During his final year in school, the subject of the philosophy course was logic, and WUNDT earned a solid "B".

Arts. WUNDT's first grade in Music (singing) was a "B", but his performance deteriorated to a "D". His grade was most likely affected by his irregular attendance in the school choir rather than a particularly raucous singing voice. A good grade in "drawing" was probably awarded to all students, who did not excessively bother the teacher of this unprestigious high school subject.

Physical Education. Gymnastics and Physical Education were mandatory at the beginning of WUNDT's Heidelberg school years, although no grades for these subjects are available. WUNDT's teacher was KARL WASSMANNSDORFF of Berlin who had been called to Heidelberg to teach physical education at both the university and the public schools. During the Winter, instruction was given on the newly invented gymnastic equipment in an unused riding academy.

Class Ranks. The overall rank which WUNDT received in his class significantly improved during his high school years. From the middle of his class in the first year, he eventually raised his standing to the top twenty-five per cent. For one term in the Upper Sixth Grade, he also reached third place.

The extensive, independent information about Wilhelm WUNDT's high school years, which we have examined in this paper, permits some generalizations about his education at the Heidelberg Lyceum.

1.- The Heidelberg Lyceum was a solid institution, which stressed instruction in the languages and neglected the natural sciences. Classroom and library facilities were adequate but laboratory facilities and instructional equipment for the sciences was almost totally lacking. While the instructors in the classical languages and German for the most part appear to have been well-educated in their fields, the teachers of the remaining subjects often had little or no specialized training. In addition, several of

the teachers displayed a variety of personal idiosyncracies and lacked the skill and interest to establish rapport with their charges.

2.- WUNDT appears to have been an average student at the beginning of high school, who managed to advance gradually to the upper twenty-five per cent of his graduating class. Despite considerable variation in his academic performance, WUNDT did best in the humanistic, language-related subjects and experienced persistent difficulties in mathematics.

3.- There is some evidence that his "conduct", "industry", and "progress" in the various subjects varied significantly during these years. There is a pattern of initial high achievement at the beginning of each year, with some notable decline by the end of the school year. One gains the impression that WUNDT's teachers regarded him as a very able individual, who did not quite live up to his potential.

DISCUSSION

BORING's account of WUNDT's high school years and his psychoanalytic interpretation of his adult personality dynamics are at variance both with WUNDT's autobiography and with our independent sources about that period in Heidelberg. He correctly perceived that WUNDT's personal adjustment improved after the move to Heidelberg. There is no evidence, however, that the young WUNDT was ever the exceptionally industrious student caricatured by BORING (1929, 1950) and MILLER (1962). Instead, we discover an above average student, who devoted relatively little time to his school work, was exceptionally critical of the majority of his teachers and spent most of his time with a small group of intellectual companions. In other words, WUNDT acted like a remarkably normal high school student, not only for his own period but for ours as well.

The question, of course, remains why BORING should have made these rather serious errors of fact and interpretation in his famous account of WUNDT's early life (1929, 1950). It is possible that BORING may not have known German well enough and may have relied on someone else's translation when writing the WUNDT chapter of his *magnum opus*. Important place names in the brief section are misspelled in both editions of BORING's history and the meaning of WUNDT's clear comments about his private tutor is inverted!

BORING also may have misunderstood the information from WUNDT's autobiography about his school difficulties. WUNDT's life story is not at all easy to understand. He wrote *Erlebtes und Erkanntes* (1920) in a complex, thematic style which may confuse even the fluent German speaker because of its frequent changes in time frame during the description of a single event.

It also appears possible that BORING may have personally identified with the young WUNDT. A careful reading of BORING's autobiographical account of his childhood (BORING, 1961) reveals a number of significant parallels with his account of WUNDT's formative years (BORING, 1950). Our careful researches in the early life of WUNDT and his parents, however, have failed to find support for many of BORING's claims. For example, BORING's account of WUNDT's relationship with his parents is quite obviously false and may more accurately be regarded as a revelation of BORING's

feelings about his own parents and early life. The young WUNDT was essentially a spoiled and overprotected daydreamer. He was not rejected by his parents, especially the mother, as BORING has portrayed himself (BRINGMANN, BRINGMANN & BALANCE, 1980). WUNDT characterized himself as a daydreamer in those years who disliked the discipline of academic work and there is little evidence in our independent sources of the motivational patterns which BORING projected upon him during childhood and adolescence.

BORING's errors concerning WUNDT's early life might have been reduced or avoided altogether if he had tried to validate his ideas and the information with independent sources and archival documents. In fact, the very same sources of published and unpublished information which we utilized in our work, could easily have been utilized by BORING.

A comparison of our own findings with WUNDT's description of his Heidelberg school years in the autobiography (1920, pp. 41-59) shows considerable agreement, although he provides no technical details about his teachers, courses and grades. One should, of course, never accept any autobiography as a primary source of factual information (KENDALL, 1965):

Paradoxically, though the autobiographer enjoys a far more intimate knowledge of the subject than the biographer, he usually produces a life that is neither so rounded, so complete, nor so close to the actual life of the biographer. Both aim at recapturing a person in his journey through time, but the biographer creates his life out of evidence, whereas the autobiographer recreates it out of memory -and memory, unlike paper remains, is plastic, is itself creative. The autobiography gives us a special truth: a life reshaped by recollection, with all the recollection's conscious and unconscious omissions, distortions and illusions. Autobiography is not a true picture of life; it is a true picture of what, at one moment in the life, the subject wishes and is impelled to reveal of that life...(p. 30).

WUNDT wrote his autobiography in old age, more than sixty years after his association with the Heidelberg Lyceum. Moreover, he did not refresh his memory with documents from that period, even though these were available to him (BRINGMANN, BRINGMANN & UNGERER, 1980).

One major point of discrepancy exists. WUNDT has given the impression that he was at best an average student in high school. Yet, the records actually reveal him to have been an above average student in a demanding academic program, though not a brilliant student for most of that time. Clearly, he never was the industrious "grind" or the "dull genius" that BORING (1950) and MILLER (1962) have described.

WUNDT's autobiography reflects a tendency to maximize obstacles and problems in his development. His account, therefore, must be cautiously used. WUNDT, of course, wanted to tell a good story, and we all know that it is easier to identify with a hero who has to struggle and fight for survival. It is also quite possible, that in his old age and near the end of his long and most successful life, he may have been awed by his own achievements and the obstacles he had overcome. The bitter memory of the academic

failure at the Bruchsal Gymnasium may have debased the memory of his achievement at the Heidelberg Lyceum.

In conclusion, we have tried to show that classical textbook accounts and autobiographical sources about WUNDT's high school years should not be accepted unquestioningly. Both provide limited factual information and some interesting insights. Yet, these traditional sources of information must be supplemented with independent sources. Only by utilizing the full range of existing information shall we eventually be able to determine the relative credibility of each account.

SUMMARY

Ever since BORING (1929), English-language historians of psychology have linked WUNDT's prodigious output as a scholar to the development of excessively compulsive study and work habits during his high school years. WUNDT, on the other hand, has reported that he was regarded by his parents, his teachers and even himself as an academically unpromising daydreamer who was doomed to fail in life. The present study offers a variety of new information about WUNDT's accomplishments at the Heidelberg Lyceum from 1845-1851, including a record of his actual school grades. It was concluded that Wilhelm WUNDT was an above average student in humanistic, language-related subjects. His education in the natural sciences and, especially, in mathematics was quite limited. There is evidence that his teachers regarded him as a talented individual who did not quite live up to his potential. Possible reasons for BORING's misperception of WUNDT's school record and general problems in the use of autobiographical accounts as primary sources in the history of psychology are discussed.

BIBLIOGRAPHY

- BORING, E.G.: *A history of experimental psychology*. New York. Appleton, 1929.
- BORING, E.G.: *A history of experimental psychology*. 2nd ed. New York. Appleton, 1950
- BORING, E.G.: *Psychologist at large*. New York. Basic Books, 1961.
- BRINGMANN, W.: "W. Wundt in Heidelberg 1845-1874". *Canadian Psychological Review*, 1975a, 16, 116-121.
- BRINGMANN, W.: "Design questions in archival research". *Journal of the History of the Behavioral Sciences*, 1975b, 11, 23-26.
- BRINGMANN, W.: "The use of autobiographical sources in the history of psychology". In G. BITTNER (Ed.): *Personale Psychologie*. Goettingen. Hogrefe, 1983, pp.15-31.
- BRINGMANN, W., BRINGMANN, N. & UNGERER, G.: "The establishment of Wundt's laboratory: an archival and documentary study". In W. Bringmann and R. Tweney (Ed.): *Wundt Studies*, 1980, 123-157. Goettingen. Hogrefe.
- BRINGMANN, W., & UNGERER, G.: "An archival journey in search of Wilhelm Wundt". In J. BROŽEK & L.J. PONGRATZ (Eds.): *Historiography of modern psychology*. Toronto. Hogrefe, 1980.

- BRUNO, F.J.: *The story of psychology*. New York. Holt, Rinehart & Winston, 1972.
- CADENBACH, C.A.: *Das Lyceum zu Heidelberg in seiner geschichtlichen Entwicklung*. Heidelberg. Reichard, 1859.
- DERWEIN, H.: *Heidelberg im Vormärz und in der Revolution 1848/49*. Heidelberg. Koester, 1958.
- DIAMOND, S.: "Wilhelm Wundt". In C.C. Gillespie (Ed.): *Dictionary of Scientific Biography*. New York. Scribner's, 1973, 14, 526-529.
- DITTENBERGER, F.: "Auszug aus dem Todtenbuch der evangelischprotestantischen Gemeinde zum heil. Geist in Heidelberg (Bad, 19, S. 88 Nr 54). November 22, 1974 (Death Certificate of W. Wundt's father).
- DITTENBERGER, F.: *Gesetze für die Schüler des Grossherzoggl. Lyceums zu Heidelberg*. Heidelberg. Reichard, 1874.
- HAUTZ, J.F.: *Jubelfeier der dreihundertjährigen Stiftung des Grossherzoglichen Lyceums zu Heidelberg*. Heidelberg. Winter, 1847.
- HEUNISCH, A.J.: *Beschreibung des Grossherzogthums Baden*. Heidelberg. Groos, 1833.
- HEUNISCH, A.J.: V. *Das Grossherzogthum Baden*. Heidelberg. Groos, 1857.
- KENDALL, P.: *The art of biography*. New York. Knopf, 1965.
- KUSSMAUL, A.: *Jugenderinnerungen eines alten Arztes*. Stuttgart. Bonz, 1899.
- MECK, W.: *Das höhere und niedere Studien -Wesen im Grossherzogthume Baden*. Konstanz. Meck, 1846.
- MILLER, G.A.: *Psychology*. New York. Harper & Row, 1962.
- MISIAK, H. & STAUDT-SEXTON, V.: *History of Psychology*. New York. Grune & Stratton, 1966.
- PAULSEN, F.: *The German universities*. New York. Scribner's, 1906.
- "Verzeichnis der in das Gymnasium zu Heidelberg Aufgenommenen Schüler. Lyceum zu Heidelberg (Student and grade record of Heidelberg Lyceum, Archive, Elector Frederic Gymnasium, Heidelberg, Germany), 1831/32-1866/67
- WATSON, R.: *The great psychologists*. Philadelphia. Lippincott, 1963.
- WERTHEIMER, M.: *A brief history of psychology*. New York. Holt, Rinehart & Winston, 1970.
- WUNDT, W.: *Völkerpsychologie. 1. Bd. Die Sprache I*. Leipzig. Engelmann, 1900.
- WUNDT, W.: *Erlebtes und Erkanntes*. Stuttgart. Kröner, 1921.