To the University Community

Please consider SCUE's White Paper on University Minors and Minor Programs. We present this White Paper as the culmination of nearly a year's research, debate, and development. SCUE has attempted to design a program unique among our peer institutions in order to help the University to realize its educational potential. This program would provide students with educational opportunities currently unavailable at Penn or elsewhere at the university level.

With the recent creation of traditional-type minors in both the School of Engineering and the School of Nursing and the implementation of a new dual-degree program between the College of Arts and Sciences and the Wharton School, the issues of minors and interdisciplinary programs are current topics of discussion among students, faculty, and administrators. SCUE hopes that this White Paper will be received in a timely fashion and that it will promote further action in these areas. We believe that this paper offers a carefully thought-out program which could be implemented during the 1994-1995 academic year.

If after reading and considering this paper you would like to provide comments, criticisms, or suggestions, please submit them to SCUE, 127 Houston Hall, Philadelphia PA 19104-6306.

Matthew B. Kratter, Chair, Student Committee on Undergraduate Education
 Satya J. Patel and Brian P. Toll, Co-Chairs, University Minors Subcommittee
 Members of the Subcommittee: Sunil Budhrani, Tasha Cabot, Julie Kim and Ronald Lee

The Student Committee on Undergraduate Education White Paper on University Minors and Minor Programs

April, 1994

The concept of One University is based on the conclusion that our greatest potential strength and uniqueness lies both in our historic linkage of professional education with the liberal arts and sciences, and in our contemporary advantage of the close physical proximity of our schools on one campus. The key to the philosophy underlying the concept is the thought that the University of Pennsylvania would be an institution which sees life whole.

-Pennsylvania: One University Report of the University Development Commission

Executive Summary

The SCUE White Paper on University Minors and Minor Programs includes two parts. The first discusses the existing minor program and presents ways in which the current structure can be improved. The latter part of the White Paper outlines a plan for the development of a new interdisciplinary minor program entitled University Minors.

The existing minor program fails to live up to its potential for three reasons. First, students who receive insufficient guidance from faculty advisors and departments often obtain minors after taking six to eight courses selected arbitrarily from the major. Unfortunately, minors fulfilled in this manner do not always provide a sound understanding of the academic discipline. SCUE suggests that students be required to meet with faculty advisors when deciding to pursue a minor. An explanation of the course choices should then accompany the application for recognition of the minor. The explanation must demonstrate how the chosen courses comprise a coherently structured course of study.

Secondly, some Penn students cannot participate in all existing minor programs. Providing equal access to the University's wealth of educational offerings, irrespective of a student's home school, should be a top priority. Allowing students from all four schools to participate in all minor programs presents little if any difficulty and promotes exploration in other fields.

Third, not all major programs have an affiliated minor. Currently, students may not receive a minor in Business or Communication. Again, equal access to the University's resources suggests that students should be able to participate in such minors. SCUE presents a suggested format for these minors.

The development of a University-wide interdisciplinary minor program naturally follows once the existing minor program is improved. University Minors build on Penn's unique strengths while utilizing the natural overlap of course material across departments in an organized and rational manner. University Minors provide students with a currently unavailable academic opportunity and present a viable alternative to current programs of dual-degrees, double-majors, or submatriculation that ultimately may be too demanding for some students.

The University Minors program would further intellectual relationships between students. Faculty, while creating the programs, will discover new connections between fields of study. The true sense of One University will be realized only with a breakdown of boundaries among schools and their constituencies.

The University Minors program will require funding by the Provost and

the appointment of a Director of University Minor Programs who will chair a Committee on University Minor Programs. The Committee will recommend all University Minors directly to the faculty for approval and will also be responsible for the development of an appropriate advising system.

SCUE developed several possible University Minors. The proposals are primarily intended to illustrate feasibility and to demonstrate possible structures of University Minors. Dialogue among students and faculty is ultimately necessary if the specific proposals are to be considered for the University Minors program.

Introduction

The University has historically recognized that its diversity of educational opportunities serves as the foundation for Penn's uniqueness as an institution. In accordance with Eliot Stellar and Robert Dyson's One University concept, enhancing Penn's educational opportunities requires the further integration of the University's vast resources. This White Paper on University Minors and Minor Programs presents an innovative approach for providing students with programs that incorporate courses from multiple departments or schools. This type of University-wide program is the logical outgrowth of a desire to provide students with interdisciplinary programs and courses of study that offer both breadth and depth in an area of academic interest. By virtue of combining the resources of its many undergraduate and graduate schools, Penn will be able to offer educational opportunities unavailable elsewhere at leading institutions.

The conceptualization of such a program is far from unanticipated. The essence of the University Minor program was discussed by SCUE in the 1984 Interschool Minors Proposal. In *Almanac* April 10, 1984, the Faculty Council on Undergraduate Education "...endorsed proposals to encourage establishment of both interdisciplinary and interschool course arrangements, termed... 'University Concentrations,' to build on Penn's special strengths in the liberal arts and professional areas." In 1990, the SCUE White Paper on Undergraduate Education questioned the reality of the One University concept, and suggested that a program be created to "give students an option to remain in their home schools and concentrate on their chosen discipline, while at the same time pursuing coherently structured advanced study in another area."

Students at Penn are eager for these exciting interdisciplinary programs to become reality. This White Paper addresses the educational concerns of the University and of each undergraduate school by exploring a structure for the University Minors program. This paper also provides several preliminary possibilities for University Minors which should serve to aid in the discussion and implementation of the program. In so doing, SCUE demonstrates that University Minors are both viable and educationally sound.

SCUE recognizes that in order to implement an advanced form of a minor program that the current minor program must reach its full potential through restructuring the goals of the minor and by allowing all students to receive a minor based on any current major. Before introducing the specifics of our proposed University Minors program, this White Paper addresses the deficiencies in the existing minor program.

Philosophy & Structure of Existing Minors

The philosophy of the existing minor program is to encourage students to pursue depth of study in a secondary field of interest while still concentrating in their primary academic discipline. The minor program also provides students with the opportunity to focus their elective courses.

The minor is structured as a group of six to eight courses that are intended to comprise an academically coherent field of study. Existing minors correspond to major programs but require half of the coursework.

State of the Minor Within the Schools

College of Arts and Sciences—The College provides minors within individual departments. Each current major program has an associated minor with the exception of Communication. College minors are accessible to students in all undergraduate schools; however, students in the Wharton School receive no recognition for completing the minor. College students may obtain a Cognitive Science Minor, which is an interdisciplinary program between the College of Arts and Sciences and the School of Engineering.

School of Engineering and Applied Science—Engineering students may participate in all minors offered in the College of Arts and Sciences. A Cognitive Science Minor is provided for Engineering and College Students. A technological literacy program of study exists but is not officially recognized as a minor. The School of Engineering recently developed minors within its individual departments. These programs are intended to be available to all undergraduates with qualifying backgrounds.

School of Nursing—Nursing students are permitted to obtain minors in the College of Arts and Sciences and specific concentrations within the Wharton School. The School of Nursing has announced plans for a Nutrition Minor which will be available in Fall 1994. This minor is unique in that there is no corresponding major. Hence, the Nutrition Minor follows many of the principles of the University Minors program.

Wharton School—The Wharton School does not provide minors for students at Penn. Wharton allows Nursing students to participate in selected concentrations. Students in Wharton receive no official recognition for completing a minor elsewhere in the University.

Strengthening the Existing Minor Program

Minor programs in their current form have been criticized by some members of the University Community who question their academic merit and claim that the courses which frequently comprise a student's minor are haphazardly chosen. SCUE understands the foundation for these criticisms in light of the fact that sufficient guidance is often not provided to students when they choose the courses to fulfill their minors.

A sound understanding of an academic discipline through a minor can only be guaranteed if students are focused in the course material to which they are introduced. It is vital that the faculty lend their expertise to students in designating the most appropriate courses for minor interests. Each existing minor program should reevaluate the selection of courses that can be taken for the minor. Currently, many minor programs allow students to choose from all departmental course offerings. While choice is an important consideration, only a rationally structured program can fulfill the goals of the minor. SCUE suggests that approval of a minor require not only the appropriate number of classes but also an explanation of the relationships among the courses chosen.

Strengthening the existing minor program entails not only ensuring intellectual coherence but also guaranteeing accessibility to all students. Students desire the freedom to explore, with depth, disciplines taught in other schools. Consequently, SCUE encourages the four undergraduate schools to demonstrate their support for academic opportunity by allowing all undergraduates to participate in all minor programs offered at the University. As the Wharton School is the only school that does not recognize its students participation in minor programs, an argument for allowing Wharton students to receive minors appears at the end of this section.

Finally, completion of the existing program requires that each major have a corresponding minor program. Most majors currently offer a minor with a few notable exceptions. Proposals for a Business Studies Minor and a Communication Minor appear below.

Business Studies Minor

In defining the Business Studies Minor, SCUE took care to create a workable definition evolving from the current Wharton degree curriculum. Wharton undergraduates take a wide range of courses that qualify them as Business Majors with four-course concentrations in one of several subdisciplines, such as Finance or Management. The Business Studies Minor is based on the major program rather than on concentrations. The minor includes a rigorous set of core classes that will provide students with a sound background in business fundamentals. The proposed Business Studies Minor also provides students with the opportunity to explore Wharton's wide array of course offerings or alternatively provides students with the opportunity to concentrate in a specific business discipline. Due to the inclusion of courses from several departments, the Business Studies Minor concludes with a senior capstone seminar intended to further integrate knowledge attained in the other courses. This proposal contrasts with the College of General Studies' Cluster in Business Studies (see appendix*), offered through the Wharton Evening School, by requiring more depth of study.

Issues still requiring resolution include the selection of the most appropriate core courses and the prerequisite knowledge needed for each course. For example, Finance 102 could be an excessively difficult course for students without a more thorough statistics background. To resolve this potential difficulty, either the minor could require Statistics 102, Introductory Business Statistics, or Wharton could create a one-semester class in statistics similar to Economics 5. Likewise, the Wharton School could create a one-semester class in accounting that could be similar to the two mini-course requirement (Accounting 621 and 622) for MBA students.

Wharton could require that the two upper level courses be taken in the same department to provide for more depth within the minor. This idea conflicts with the flexibility principle of the original minor framework but creates a firmer intellectual justification for the minor.

- ACCT 101 Principles of Accounting
- FNCE 102 Corporate Finance
- MGMT 101 Introduction to Management
- MKTG 101 Introduction to Marketing
- STAT 101 Introductory Business Statistics
- Any TWO upper-level courses offered by the Wharton school.

Prerequisites: MATH 140, 141, ECON 1, 2.

Communication Minor

The Communication Minor was developed by utilizing the Communication Major framework as a guideline. The minor provides a coherent study of communication while still allowing students to choose from among the many course offerings in the Annenberg School of Communication. Communication 340 is included to function as a culmination of study in communication.

Introduction (Choose 2):

- COMM 125 Introduction to Communication Behavior
- COMM 130 Introduction to Mass Media
- COMM 226 Introduction to Political Communication COMM 262 Visual Communication

Any THREE additional Communication courses COMM 340 - Basic Communication Research.

Justifying Minors for Wharton Students

Currently, the Wharton School is the only undergraduate school that does not certify its students' participation in any minor offered at the University. The school justifies its restriction in part by stating that minors will detract from breadth in the liberal arts. To allay this concern, SCUE suggests that Wharton consider raising the number of courses required for graduation for students participating in minor programs. However, the Executive Committee must be flexible when increasing requirements and must take into account each individual student's situation if necessary. Specifically, the Executive Committee should consider the type of minor program being pursued and the requirements filled prior to matriculation.

Furthermore, SCUE feels that there are four additional reasons for removal of the current restriction on minors for Wharton students. First, increased academic options promote a well rounded, in-depth education. Wharton students desire the improved written, communication and analytical thinking skills associated with liberal arts education. Also, many Wharton students desire the opportunity to explore areas of interest simply for the sake of education.

Second, acquisition of these skills can be very important in enhancing a graduate's credentials. Wharton must take the lead in preparing its students for the highly competitive, changing environment that awaits its graduates. The expanded knowledge provided by a minor presents students with the ability to adapt in a dynamic world.

Third, Wharton's commitment to internationalization and global perspectives suggests that it should encourage language minors. Wharton encourages its students to pursue study abroad. By allowing for language minors, more students will pursue the study abroad option even if they

^{*} Unpublished appendices are available from the SCUE office. — Ed.

cannot fulfill any of their business classes because they will have the ability to complete the minor in the foreign country. A structured study abroad program that includes the completion of a language minor will act as more of an attraction for students who desire to participate in one of Penn's non-Wharton study abroad programs than a study abroad program where students can only fulfill random electives.

Lastly, the results of SCUE surveys (see appendix*) conducted of Wharton students indicate that they desire the opportunity to pursue minors in the College. Logically, with the recent creation of minors in the Schools of Engineering and Nursing, Wharton students would most likely desire the option to explore these minors as well.

University Minors

Objectives of University Minors

Assignment of knowledge to a particular discipline is, by its nature, imperfect. Instruction offered within individual departments cannot be isolated from other realms of academia. A program such as the University Minors program would reaffirm the natural relationships between disciplines by identifying and utilizing the overlap of course material across departments in an organized and rational manner.

The University Minors program institutes an option for students who are unable to pursue the current alternatives of dual-degrees, double-majors, or submatriculation. Unfortunately, the rigorous nature of these options and the excessive commitments required for these academic pursuits act as a serious obstacle for many students. For such students, University Minors would provide a currently unavailable academic opportunity.

Merits of University Minors

Education at the University extends beyond the classroom. University Minors would provide numerous opportunities for students with related interests to interact while ensuring that these students are exposed to various disciplines and modes of thought that they might not have otherwise encountered. University Minors will act to further intellectual relationships between students from diverse educational perspectives. Such relationships will impact students' perceptions and decisions in a social and educational context.

SCUE feels that the walls that separate students—the same barriers that promote school loyalty to the exclusion of University loyalty—must be broken down. Students should acquire allegiances to both their school and the University. University Minors will act to integrate both educational and social differences between students of the four undergraduate schools in order to enhance every student's experience at Penn.

University Minors will also facilitate relationships among faculty. As faculty members discuss and create University Minor programs, they will discover new connections between fields of study. Faculty, as well as students, will gain from these interactions. Fresh perspectives will enhance the quality and comprehensiveness of faculty work.

Finally, the expansion of educational options can only act to improve the reputation of the University as a leader in undergraduate education. University Minors will act as a highly effective recruiting tool, possibly to a greater extent than Penn's dual degree options. Penn will be able to attract better students who desire a liberal arts education in combination with instruction in the professional schools at the University. Top quality students who are unsure of their career path would find Penn attractive because it would offer a range of interdisciplinary options unavailable among our peer institutions.

Proposals for University Minors

SCUE has developed several models for individual University Minors. Each University Minor consists of six to eight courses that provide sufficient depth of study. The structures of the University Minors could vary. As such, in some instances we list specific courses and tracks that we believe could comprise the minor. In other instances we list a variety of courses currently available at the University that we hope the faculty would consider including. Each University Minor concludes with a capstone seminar that integrates the many aspects of students' explorations. The capstone seminar should function in the same manner as senior major seminars by emphasizing research and applications of newly acquired knowledge and skills.

The University Minors program may function as a testing ground for exciting new educational programs. SCUE envisions each University Minor program coordinating a lecture and discussion series for its participants. These lectures, given by faculty members from the relevant departments, would expose participants to additional topics related to the interdisciplinary minor, act as forums for discussion, and provide potential topics for capstone seminar research projects. If the program is successful, SCUE foresees the application of such a lecture series to existing majors and minors, creating a new cornerstone of undergraduate education.

Eight potential University Minors are presented below primarily for discussion purposes. These minors, found in the next section are: Consumer Psychology, Contemporary Ethics, Diversity in American Society, Environmental Management, Health in Society, Human Development, Legal Environment, and Technological Literacy. Each of these proposals must be discussed with the faculty to determine the academic validity of both the suggested minors and the courses that would be included within the specific minors. In no way does SCUE intend to dictate the specific proposals or the recommended courses and structures located therein.

Please note that the recommended minors may contain suggestions that are relevant to all University Minors. Classes are listed in alphabetical order—not necessarily in the order they should be taken.

Consumer Psychology

Dual degrees between Marketing and Psychology are popular because of the strong relationship between these two disciplines. This University Minor would enable students to pursue studies of the mind and apply their knowledge to consumer behavior in markets.

This minor is not intended for Psychology Majors or students with Marketing concentrations due to the course overlaps. Students with Marketing concentrations would be best served if they participated in a Psychology Minor that might include the three courses below. Psychology Majors could take these courses inside and outside of the major on their own or participate in the Business Studies Minor, choosing MKTG 211 and OPIM 102 as the two upper level courses. The concern over course overlap will be similar in the other University Minor proposals included below. Students in these situations should be offered appropriate choices.

Many additional interdisciplinary minors programs could incorporate Psychology. For example, Psychology could be linked to Management, creating a minor in Organizational Behavior, Psychology of Entrepreneurship, or Human Resource Management. Psychology could also be tied to Political Science and Labor Relations, creating a minor in Industrial Psychology.

- COMM 250 Social Cognition and Communication
- MKTG 101 Introduction to Marketing
- MKTG 211 Consumer Behavior
- OPIM 102 Decision Processes
- PSYC 1 Introduction to Experimental Psychology PSYC 157 Human Information Processing
- PSYC 170 Social Psychology

Prerequisite: STAT 101 or STAT 111

Contemporary Ethics

The idea of a University-wide, interdisciplinary program of ethics has been discussed for over a decade. SCUE feels that this could be an invaluable program that would introduce students to contemporary ethical dilemmas and the notion of ethics as a critical facet of society. Some other tracks for the minor might include business ethics, legal ethics, or ethics in government and public policy.

Core Classes:

- LGST 210 Corporate Responsibility and Ethics
- PHIL 2 Ethics
- PHIL 277 Government and Legal Ethics1
- RELS 112 Religious Ethics and Modern Society

Capstone

Health and Society Track (Choose 3):

- PHIL 72 Biomedical Ethics
- SOCI 418 Medical Ethics and Society
- NURS 330 Theoretical Foundations of Health Care Ethics
- NURS 525 Ethical and Legal Aspects of Technology and Health

Diversity in American Society

The Final Report of the Commission on Strengthening the Community recommends that, "[the] undergraduate deans of the appropriate schools should use incentives to encourage the development of courses that would address: 1) the variety of cultures, races, religions and ethnic groups; 2) the history of cooperation and conflict among these groups; and 3) the social practices of stereotyping." These issues, falling under the rubric of "diversity issues" could be the foundation for a University Minor. The proposed University Minor in Diversity in American Society seeks to "make it more attractive for [interested] students to learn more about traditions, experiences, and viewpoints of those different from themselves, and to investigate the ways in which people tend to create stereotypes about other groups."

An understanding of different cultures, ethnicities, religions, etc. and

This is a new course that deals with social philosophy, law and ethics. This course may also be appropriate for the Legal Environment Minor.

how such groups interact with each other is important both inside and outside of the Penn community. Furthermore, this new minor in Diversity in American Society could allow for focus into a specific race, religion, gender, etc. This option would be attractive not only to students who belong to such a group, but also to individuals who will pursue careers in which they must interact with specific groups.

The suggested courses are offered only as a basis of discussion. SCUE encourages further dialogue on a possible University Minor in Diversity in American Society so that various viewpoints and ideas can be incorporated.

Possible courses include:

- AFAM 6 (cross-list SOCI 6) Race and Ethnic Relations
- AMCV 2 Americans and Their Civilization
- FOLK 22 World Music and Cultures
- FOLK 117 Music, Gender and Culture
- SOCI 9 Introduction to Sociology of Religion
- SOCI 110 The Rich and the Poor
- URBS 270 Ethnicity
- WSTD 3 (cross-list PCSC 3) Discrimination: Sexual and Racial Conflict

Capstone

Environmental Management³

The Wharton School recently established an Environmental Management concentration for Fall 1994. SCUE is hopeful that courses from this concentration will be included in the University Minor. This minor would offer a background in environmental impact analysis from a wide array of viewpoints. The minor would also act as a precursor to graduate study in environmental engineering or environmental studies.

- ECON 112 Topics in Economic Theory: Environmental Economics
- ENVS 200 Introduction to Environmental Analysis
- INSR 205 Risk Management
- OPIM 102 Decision Processes
- SYS 360 Environmental/Resources Systems
- SYS 564 Environmental Impact Assessment

Capstone

Prerequisites: ECON 1, 2, 3, 4

Health in Society

The School of Nursing and the Wharton School allow their students to pursue concentration in Health Care Management. Varied perspectives on health care delivery should prove valuable to pre-health students. With the changing direction of today's health care environment, it is important that students, particularly those planning careers in the health professions, become familiar with the numerous aspects of medicine in addition to their required natural sciences.

Possible courses include:

- COMM 237 Health Communication HCMG 101 Health Care Systems HSSC 5 Heath and Society

- NURS 330 Health Care Ethics
- PHIL 72 Biomedical Ethics SOCI 334 Special Topics in Health and Medicine

SWRK 701 - Context of Health
Capstone (or substitute SOCI 334, if appropriate)

Prerequisites: ECON 1, 2

Human Development

This minor explores various issues related to human development. It analyzes different time periods in the life cycle and examines psychological, behavioral and maturational aspects of human development.

Possible courses include:

- ANTH 3 Introduction to Human Evolution BIOL 6 Human Biology

- EDUC 360 Human Development EDUC 345 Psychology of Personal Growth
- EDUC 592 Concepts in Human Sexuality
- NURS 51 Human Development
- NURS 112 Nutrition and Human Energy
- NURS 514 Aging: Old Age in American Society PSYC 1 Introduction to Experimental Psychology
- SOCI 113 Socialization and Society
- SOCI 114 Sociology of Childhood

Capstone

Legal Environment

Penn has a large population of students who are interested in the study of law. This University Minor would teach the principles upon which law is founded and practiced. Various tracks that faculty deem suitable might be included in this minor. Possible tracks include international law, the history of law, or legal thought.

ECON 36 - Law and Economics

- HIST 169 History of American Law Since 1877
- LGST 101 Introduction to Law and Legal Process
- PHIL 12 Justice, Law, and Morality PHIL 77 Philosophy of Law SOCI 135 Law and Society

Capstone

Prerequisites: ECON 1, 2

Technology in Society

The University Minor in Technology in Society should provide students with an understanding of the role that technology plays in modern society. Atechnology-based University Minor is valuable because it allow students to look at economic, social, and political problems from a technological framework.

- Societal Component (Choose 4):
 ANTH 109 Computers in Social Science
- COMM 134 Introduction to the Information Age⁴
- ECON 181 Economies of Technical Change
- HSSC 3 Technology and Society
- HSSC 13 Technology and American Cities
- SOCI 138 Computers and Society

Technical Component:

- OPIM 101- Introduction to Computers
- CSE 110 Introduction to Programming Capstone

Prerequisites: MATH 120, 141, ECON 1, 2. ECON 3, 4 required for ECON 181

Implementation of the University Minor Program

The implementation of University Minors would best be accomplished if the Provost appointed a Director of University Minor Programs. The Director would chair a Committee on University Minor Programs consisting of faculty, students, and administrators. The Committee should, within its purview of University Minor Programs, have functions similar to those of the Curriculum Committees of the individual schools. Once a University Minor is approved by the Committee it should proceed directly to the relevant faculty for a vote. This Committee would be responsible for coordinating the entire University Minors program, including advising and administration. Finally, the Committee would need to determine guidelines for student eligibility in the program.

Many members of the faculty have expressed a genuine interest in the creation of interdisciplinary programs. The aforementioned Committee should take a proactive role in soliciting the opinions and suggestions of faculty members

To create the finest University Minor programs, dialogue must take place among the faculty and administration of all of the schools at the University. University Minors may be developed with the inclusion of courses from the graduate and professional schools.

The expansion of academic options for students would need to be accompanied by additional advising as proper usage of electives becomes more important. SCUE advocates the appointment of a faculty advisor for each of the University Minors to offer guidance and counseling to interested students. Advisors for the program must be knowledgeable in the course offerings and requirements of all four undergraduate schools.

Conclusion

SCUE's White Paper on University Minors and Minor Programs attempts to resolve issues surrounding the current minor program and subsequently create an interdisciplinary program of minor-structured study for undergraduates. SCUE's proposal presents an innovative and unprecedented step toward establishing One University. By utilizing the resources of the many schools within the University, this program provides students with an unparalleled opportunity to explore areas of interest with more depth and focus.

Final Report of the Commission on Strengthening the Community, Sec. C.2.

This minor differs from the Environmental Management concentration in the Wharton School.

This is a new course being offered by the Annenberg School that introduces computer resources and the Internet and also examines the information superhighway. It is scheduled to be offered only once a year. The availability of courses is an important issue in implementation of University Minors. Schools must consider expanding the frequency of courses included in these minors.