

FORMAT GUIDELINES
for
THESES AND DISSERTATIONS

VANDERBILT UNIVERSITY
GRADUATE SCHOOL

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INTRODUCTION

These guidelines provide students at Vanderbilt University with essential information about how to prepare and submit theses and dissertations in a format acceptable to the Graduate School. The topics range from writing style to the completion of required forms and the payment of fees.

The majority of students submit an electronic version of their thesis or dissertation to the Graduate School. Electronic versions, once approved for format by the Graduate School, are uploaded to the Vanderbilt University database of Electronic Theses and Dissertations (ETD). There are instructions on the Graduate School website for guidance through this process.

Style

There is a distinct difference between submitting a manuscript to a publisher and providing a completed thesis or dissertation to the Graduate School. A manuscript represents a pre-publication format; a thesis or dissertation is a final, completely edited, published document. Students should use these guidelines, not other style manuals, as the final authority on issues of format and style. Areas not covered in this document or deviation from any of the specifications should be discussed with a Graduate School format editor. Do not use previously accepted theses and dissertations as definite models for style.

Composition and Structure

Manuscripts consist of four major sections and should be placed in the order listed:

Preliminary Pages

Title Page (required)
Copyright (optional, Ph.D. only)
Dedication (optional)
Acknowledgment (optional)
Preface (optional)
Table of Contents (required)
List of Tables (required)
List of Figures (required)
List of Abbreviations/Nomenclature/Symbols (optional)

Text

Introduction (may be referred to as Chapter 1)
Body of Manuscript

References (required)

Appendices (optional)

Acknowledgement of Support

Acknowledgement of grant and contract support is included on the Acknowledgement page (Example: A grant from the National Science Foundation). A sample is on page 19.

MANUSCRIPT PREPARATION

Abstract

The abstract is a separate document from the manuscript; it is not bound with the thesis or dissertation. Abstracts must be printed on white, 8 ½ x 11 inch paper. No page numbers are printed on the abstract. One copy is required. Abstracts must have the original signature(s) of the faculty advisor(s). The maximum length of the thesis abstract is 250 words. The maximum length of the dissertation abstract is 350 words, including the dissertation title. A sample is provided on page 13. Majors are listed on page 29-30.

Title Pages

Title pages must be printed on white, 8 ½ x 11 inch paper. Committee member signatures on the title page must be originals.

Spacing between text on the title page will vary according to the length of the title. Sample title pages, including one revised for electronic submission, are on pages 15-16. Format instructions are on page 14. ***Due to the new intra-term graduation policy, the month, day, and year representing your conferral date must be listed on the title page.***

Font

Use a standard font consistently throughout the manuscript. Font size should be 10 to 12 point for all text, including titles and headings. It is permissible to change point size in tables, figures, captions, footnotes, and appendix material. Retain the same font, where possible. When charts, graphs, or spreadsheets are "imported," it is permissible to use alternate fonts.

Italics are appropriate for book and journal titles, foreign terms, and scientific terminology. **Boldface** may be used within the text for emphasis and/or for headings and subheadings. Use both in moderation.

Margins

Measure the top margin from the edge of the page to the top of the first line of text. Measure the bottom page margin from the bottom of the last line of text to the bottom edge of the page. Page margins should be a minimum of one-half inch from top, bottom, left and right.

Right margins may be justified or ragged, depending upon departmental requirements or student preference.

Pagination

The title page is considered to be page one, but the page number should not be printed on this page. All other pages should have a page number centered at the bottom of the page. Number the preliminary pages in lowercase Roman numerals. Arabic numerals begin on the first page of text. Pages are numbered consecutively throughout the remainder of the manuscript.

The Introduction may be placed before the first page of Chapter 1, if it is not considered a chapter. The use of Arabic numbers may begin on the first page of the Introduction.

Spacing

The entire text should be single-spaced, one and one-half spaced, or double-spaced. Block quotations, footnotes, endnotes, table and figure captions, titles longer than one line, and individual reference entries may be single-spaced.

Double spacing should follow chapter numbers, chapter titles and major section titles (Dedication, Acknowledgements, Table of Contents, List of Tables, List of Figures, List of Abbreviations, Appendices, and References). Double spacing should also occur before each first-level and second-level heading, and before and after tables and figures embedded in the text. There should only be one blank space after headings.

Numbering Schemes

Chapters may be identified with uppercase Roman numerals or Arabic numbers. Tables, figures, and equations should be numbered consecutively throughout the manuscript with Arabic numerals. Equation numbers should be placed to the right of the equation and contained within parentheses or brackets.

Use uppercase letters to designate appendices.

Division

Body of Manuscript

Departments will determine acceptable standards for organizing master's theses into chapters, sections, or parts. Usually, if a thesis has headings, a Table of Contents should be included.

The dissertation must be divided into chapters. The use of parts, in addition to chapters, is acceptable.

Words and Sentences

Take care to divide words correctly. Do not divide words from one page to the next. Word processing software provides for "widow and orphan" protection. Utilize this feature to help in the proper division of sentences from one page to another. In general, a single line of text should not be left at the bottom or top of a page. Blank space may be left at the bottom of a page, where necessary.

Headings and Subheadings

Use headings and subheadings to describe briefly the material in the section that follows. **Be consistent** with your choice of "levels" and refer to the instructions on spacing, above, for proper spacing between headings, subheadings, and text. First-level headings must be listed in the Table of Contents. Second-level and subsequent subheadings may be included.

Acronyms/Abbreviations/Capitalization

Abbreviations on the title page should appear as they do in the body of the thesis or dissertation. Examples: *Xenopus laevis*, Ca, Mg, Pb, Zn; TGF- β , p53.

Capitalize only the first letter of words of importance, distinction, or emphasis in titles and headings. Do not alter the all-cap style used for acronyms (Example: AIDS) and organizational

names (Example: IBM). Use the conventional style for Latin words (Examples: *in vitro*, *in vivo*, *in situ*). Genus and species should be italicized. Capitalize the first letter of the Genus, but not that of the Species name (Example: *Streptococcus aureus*).

Tables and Figures

Figures commonly refer to photographs, images, maps, charts, graphs, and drawings. Tables generally list tabulated numerical data. These items should appear as close as possible to their first mention in the text. Tables and figures may be placed in appendices, if this is a departmental requirement or standard in the field.

Tables and figures should be numbered with Arabic numerals, either consecutively or by chapter. Be consistent in the style used in the placement of tables and figure captions.

Tables and figures may be embedded within the text or placed on a page alone. When placed on its own page, a figure or table may be centered on the page. When included with text, a table or figure should be set apart from the text.

Tables and figures, including captions, may be oriented in landscape.

Table data and figure data must be kept together, if the information fits on one page.

Table of Contents Preparation

Although the Graduate School does not provide word processing expertise or information, one hint is included. In Word, use the "Format Tabs" feature to prepare the table of contents. Type the number 6.5 in the Tab stop position box, select Alignment right and select Leader Option 2. These commands allow the computer to right align the page numbers and accurately place the "dots". Use the space bar for indentation. Table of contents instructions and examples are included on pages 20- 21.

Use these same steps to prepare the List of Tables and Lists of Figures.

GENERAL INFORMATION

Language Other than English

Students in foreign language departments may submit manuscripts in a language other than English. The title of the thesis or dissertation should be written in the foreign language on the title page and abstract.

Multi-Part and Journal Article Format

A multi-part presentation format may be used for combining research that has been conducted in two or more related or non-related areas, or for presentation of combined journal articles (published or submitted for publication). Organization of the parts or articles into chapters is recommended. Each "chapter" may contain its own list of references and appendices.

Each dissertation should include the appropriate preliminary pages, an introduction presenting the general theme of the research and literature review, and a conclusion summarizing and integrating the major findings. Each "chapter" should consist of well-defined "subheadings," such as introduction, methods, results, and discussion.

The preliminary pages should include only one Table of Contents, List of Tables, List of Figures, and List of Abbreviations/Nomenclature. Tables and figures should be placed within the text, not at the end as is customary in articles prepared for journal publication.

Permission to Use Copyrighted Material

The standard provisions of copyright laws regarding quoted material under copyright apply to electronic publication. Dissertations are scanned by ProQuest for previously copyrighted material. When a student has published portions of their dissertation as articles in a copyrighted journal, permission from the journal to include that material must be obtained. ProQuest requires written permission from the copyright holder of any extensively quoted material. Emailed approvals from the journals are accepted. Proper acknowledgement within the text of the manuscript must be made. Students should discuss questions about copyrighted material with their dissertation director.

EXTRA COPIES

The Graduate School recommends Campus Copy for procuring bound copies of theses and dissertations. You may contact them directly at 615-322-6849, or by email at <http://printingservices.vanderbilt.edu>.

INTENT TO GRADUATE

At the beginning of the semester in which a student will be completing a degree, he or she must fill out an "Intent to Graduate" form and return it by the date specified at the top of the form. Intent forms can be downloaded at https://gradschool.vanderbilt.edu/academics/forms_timeline.php and require the signature of the Director of Graduate Studies. Inform the Graduate School if information on "Intent to Graduate" form changes or if completion plans are delayed.

FORMAT REVIEW

After the specifications in these Guidelines have been incorporated into the thesis or dissertation, a student needs format approval. Please contact Liz Leis at liz.leis@vanderbilt.edu or 322-3934 or Linda Harris at linda.harris@vanderbilt.edu or 322-3943 to schedule an appointment. This meeting requires less than an hour. It is helpful to send your document in advance, as an email attachment.

Students who no longer reside in Nashville must adhere to the specifications in these Guidelines. Many students schedule a meeting time when they are on campus for their defense. Manuscripts can be sent for format review electronically. Students are responsible for ensuring that all documents are received. The Graduate School address is 117 Alumni Hall, Vanderbilt University, 2205 West End Avenue, Nashville, TN 37240.

SUBMISSION

Required documents should be submitted to the Graduate School by the deadline listed at the top of the "Intent to Graduate" form. Refer to the "Checklist" on page 10.

Master's Thesis

The master's student must submit one copy of the title page, with original signatures of the committee members and one copy of the abstract, with the original signature of the advisor.

PhD. Dissertation

The doctoral student must submit one copy of the title page with original signatures of the committee members and one copy of the abstract, with the original signature of the advisor. The forms described below must also be completed and returned.

ProQuest Information and Learning. Dissertations must be published electronically through ProQuest. Please select the appropriate Publishing Agreement Form below:

[ProQuest Dissertation Electronic Submission Agreement](#) or

[ProQuest Dissertation Paper Submission Agreement](#)

Return pages 4-5 (and possibly page 6) to the Graduate School.

Worldwide access is preferred; however, students may restrict access to their work for a period of up to two years. After two years, the dissertation will be released for worldwide access.

Copyright Registration. ProQuest will register a copyright on behalf of doctoral recipients. Students who elect this service should sign the copyright section of the Publishing Agreement Form, include a copyright page within the dissertation, and pay the registration fee. Copyrighting is optional. Discuss questions with committee members.

Survey of Earned Doctorates. Students finishing a doctorate degree are requested to complete the SED survey accessible at <https://sed-ncses.org>. Information provided to the National Opinion Research Council remains confidential and will be used for research or statistical purposes. Email confirmation of completed survey to GradSEDsubmission@vanderbilt.edu.

Curriculum Vitae. Instructions on preparing a curriculum vitae are available at: https://gradschool.vanderbilt.edu/forms/CV_requirement.pdf. This document should be sent electronically to Gradcvsubmission@vanderbilt.edu.

PRINTED SUBMISSION

Students who elect to print their theses or dissertation must provide the Graduate School with two complete copies of their document. Both copies must be printed on white, acid-free 8 ½ X 11 inch paper of at least 20-lb. weight and 25% cotton content. Paper of this quality is required to preserve the content over time. Vanderbilt watermark meets these minimum specifications, but watermark is not required.

Copies submitted to the Graduate School must be sharp, clear, and free of smudges or extraneous marks. Text print must be consistently clear and in black ink. Print on one side of the page only. The use of color in graphics, figures and tables enhances detail and is encouraged.

There is a binding fee of \$38 (\$19 per volume). Both copies are placed in the Vanderbilt University library system.

Checklist for Graduation

The following items must be submitted to the Graduate School by the deadline listed on the Intent to Graduate form:

Master's Thesis:

1. _____ One copy of the title page on plain, white, 8½ X 11 inch paper (copy paper is acceptable) with original signatures of advisor and second reader (**month, day, and year representing your conferral date must be listed on the title page**).
2. _____ One copy of the abstract on plain, white 8½ X 11 inch paper (copy paper is acceptable) with original signature of advisor(s).
3. _____ One copy of the "Completion of Master's Thesis" form with original signatures of two faculty members and DGS

Ph.D. Dissertation:

1. _____ One copy of the title page on plain, white, 8½ X 11 inch paper (copy paper is acceptable) with the original signatures of committee members (**month, day, and year representing your conferral date must be listed on the title page**).
2. _____ One copy of the abstract on plain, white, 8½ X 11 inch paper (copy paper is acceptable) with original signature of dissertation director.
3. _____ One photocopy of the signed title page on plain, white copy paper.
4. _____ ProQuest Publishing Agreement. Select appropriate link to access the document:
[ProQuest Dissertation Electronic Submission Agreement](#)
[ProQuest Dissertation Paper Submission Agreement](#)
Complete pages 4 & 5 only...include page 6 if you elect to register your copyright.
5. _____ Survey of Earned Doctorates <https://sed-ncses.org> (email confirmation of completed survey to GradSEDsubmission@vanderbilt.edu).
6. _____ Curriculum vitae (send electronically to GradCVsubmission@vanderbilt.edu).
7. _____ Fees for electronic submission:
 \$ 25.00 Traditional Publishing OR
 \$120.00 Open Access Publishing
 \$ 55.00 Copyright fee (optional)

 Fees for printed submission:
 \$ 65.00 Traditional Publishing OR
 \$160.00 Open Access Publishing
 \$ 55.00 Copyright fee (optional)

Select one option for submission of thesis or dissertation:

- Electronic submission: Revise title page with typed names of committee members, then convert document to a PDF. Name your file with your last name (for instance, Schemmer.pdf). Upload on the ETD (Electronic Theses and Dissertations) website. There are no binding fees.

OR

- Printed submission: Two copies of the entire thesis or dissertation, printed on 8½ X 11 inch, white, quality bond paper of at least 20-lb. weight and 25% cotton content, must be turned into the Graduate School. Both copies will be placed in the Vanderbilt University library system. The binding fee is \$38.00. Electronic publishing is also required for printed dissertations.

*Cash/checks: One check for total amount due made payable to Vanderbilt University; cash in exact amount only.

Margin Template



Minimum ½" top margin
(from top of page to top of first line text)

←Minimum ½" left margin Minimum ½" right margin →

(Page numbers fall **WITHIN** the bottom margin and must be centered)

(From the bottom of the last line of text to the bottom of the page)

Minimum ½" bottom margin



Format for Abstract

MAJOR

*(All caps, underlined, right justified, one inch from top of page. DO NOT precede Program name with the words "Department of"). *See pages 29-30 for the list of majors*

(Set line spacing to double spacing after Title)

Final title of dissertation, upper/lower case, single-spaced, centered

Your name, upper/lower case, centered

Dissertation (or Thesis) under the direction of Professor (Full Name)
(Underlined, centered, upper/lower case, double space to text, no page numbers)

TEXT

(Double spaced)

Approved _____
Type full name of Dissertation (or Thesis) director

Date _____

Sample Abstract

HUMAN GENETICS

Strain-Specific Alleles of *Phox2B* Differentially
Modify *Sox10^{Dom}* Aganglionosis

Lauren Colleen Walters

Dissertation under the direction of Professor E. Michelle Southard-Smith

Hirschsprung disease (HSCR) is characterized by a lack of enteric ganglia in a variable portion of the distal bowel. The complex inheritance pattern of this disorder has led researchers to focus on genetic effects other than the putative disease mutation. Mouse models provide a controlled background for these types of studies. *Sox10* is an essential gene for the development of the enteric nervous system (ENS). *Sox10^{Dom}* mice on a mixed genetic background exhibit the variable aganglionosis seen in HSCR cases. Congenic lines of *Sox10^{Dom}* mice on distinct inbred genetic backgrounds, C57BL/6J (B6) and C3HeB/FeJ (C3Fe), differ in penetrance and extent of aganglionosis. A linkage screen for modifiers of *Sox10^{Dom}* aganglionosis was undertaken in a large B6 X C3Fe F₂ population. Several potential modifier regions were identified, with the most significant located on chromosome five (*Sox10m3*). The most relevant candidate gene in this region was *Phox2B*, an essential factor in autonomic neurogenesis.

Approved _____ Date _____

E. Michelle Southard-Smith, Ph.D.

Format for Title Page

Title of dissertation, upper/lower case, single-spaced, centered
(One inch from top of page to top of title)

(Spacing will vary depending on length of the title of thesis or dissertation)

By

Your Name

(The following five lines must be included in this exact format)

Dissertation (or Thesis)

Submitted to the Faculty of the

Graduate School of Vanderbilt University

in partial fulfillment of the requirements

for the degree of

DOCTOR OF PHILOSOPHY

in

Major

(Refer to pages 29-30)

Month, Day, Year

****IMPORTANT: The date will reflect your proposed degree conferral date as selected from the Intent to Graduate form. This is your actual GRADUATION date, not your thesis or defense date.***

Nashville, Tennessee

Approved: *(Original signatures of committee members)*

Date:

(Typed member's full name under each signature line)

(Typed member's full name under each signature line)

(Typed member's full name under each signature line)

(Typed member's full name under each signature line)

(Typed member's full name under each signature line)

(Title Page carries the value of page "i", but do not print number on page)

Sample Title Page

**Mechanisms of Antibiotic Resistance
and Pathogenesis in *Acinetobacter baumannii***

By

Marguerite Indriati Hood

Dissertation

**Submitted to the Faculty of the
Graduate School of Vanderbilt University**

in partial fulfillment of the requirements

for the degree of

DOCTOR OF PHILOSOPHY

in

Microbiology and Immunology

August 31, 2017

Nashville, Tennessee

Approved:

Date:

Timothy L. Cover, M.D.

Dean W. Ballard, Ph.D.

Timothy S. Blackwell, M.D.

Terence S. Dermody, M.D.

Eric P. Skaar, Ph.D.

(Title Page carries the value of page "1", but do not print number on the page)

Sample Title Page, Revised for Electronic Submission

**Mechanisms of Antibiotic Resistance
and Pathogenesis in *Acinetobacter baumannii***

By

Marguerite Indriati Hood

Dissertation

**Submitted to the Faculty of the
Graduate School of Vanderbilt University
in partial fulfillment of the requirements**

for the degree of

DOCTOR OF PHILOSOPHY

in

Microbiology and Immunology

August 31, 2017

Nashville, Tennessee

Approved:

Timothy L. Cover, M.D.

Dean W. Ballard, Ph.D.

Timothy S. Blackwell, M.D.

Terence S. Dermody, M.D.

Eric P. Skaar, Ph.D.

(Title Page carries the value of page "i", but do not print number on the page)

Sample Copyright Page

**Copyright © 2014 by Clinton Cody Bertram
All Rights Reserved**

Sample Dedication Page

To my amazing daughters, Megan and Alisha, wise beyond their years

and

To my beloved husband, Jonathan, infinitely supportive

Begin printing page numbers here, using lower case Roman numerals and continue consecutive Roman numeral numbering throughout the preliminary pages.

Sample Acknowledgement Page

ACKNOWLEDGEMENTS

This work would not have been possible without the financial support of the Vanderbilt Physician Scientist Development Award, the American Roentgen Ray Society Scholarship or the Vanderbilt University Medical Center Department of Radiology and Radiological Sciences. I am especially indebted to Dr. Martin Sandler, Chairman of the Department of Radiology, and Dr. John Worrell, Chief of the Section of Thoracic Radiology, who have been supportive of my career goals and who worked actively to provide me with the protected academic time to pursue those goals.

I am grateful to all of those with whom I have had the pleasure to work during this and other related projects. Each of the members of my Dissertation Committee has provided me extensive personal and professional guidance and taught me a great deal about both scientific research and life in general. I would especially like to thank Dr. Ron Price, the chairman of my committee. As my teacher and mentor, he has taught me more than I could ever give him credit for here. He has shown me, by his example, what a good scientist (and person) should be.

Nobody has been more important to me in the pursuit of this project than the members of my family. I would like to thank my parents, whose love and guidance are with me in whatever I pursue. They are the ultimate role models. Most importantly, I wish to thank my loving and supportive wife, Jennifer, and my three wonderful children, Lauren, Jacob and Elizabeth, who provide unending inspiration.

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Spacing Template – Chapter One, Page One

CHAPTER I

TITLE OF CHAPTER

First-Level Heading

Begin each chapter at the top of a new page. Follow the chapter number and chapter title with the same amount of space (line and one-half, double space, or “two enters, with spacing set to double space”). Use this same amount of space to precede first -and second- level headings, and before and after figures and tables.

Second-Level Heading

The number of levels and the placement of the headings and subheadings will vary, dependent on departmental requirements or preference. Headings may be centered, left justified, in bold face, italicized, indented or numbered. Use the same style throughout the document.

Be consistent with spacing and heading styles.

(Begin the use of Arabic numbering on the first page of text. Continue consecutive Arabic page numbering throughout the remainder of the document, including the appendices and references)

CHAPTER 1

INTRODUCTION

Most children develop spatial concepts by looking at their environment and moving through their surroundings (Long & Hill, 2000). Children who are blind are unable to visually learn about their environment and are often delayed in the motor skills necessary to explore their environment (Adelson & Fraiberg, 1974; Jan, Sykanda, & Groenveld, 1990; Palazesi, 1986). Despite these delays, children who are blind are able to develop and use cognitive maps of spatial relationships though not necessary following the same pattern as children with typical sight (see literature review).

First, key terms are defined and the impact of blindness on cognitive mapping is discussed. Next, a historical perspective on cognitive mapping in children with visual impairments is provided. Then, methods of measuring cognitive mapping are presented, and the importance of studying cognitive mapping abilities in children is discussed. Finally, research questions are presented.

Definitions and Impact of Blindness on Cognitive Mapping

Definitions

Cognitive mapping – a psychological process in which one “acquires, codes, stores, recalls, and decodes information about the relative locations and attributes of phenomena in his everyday, spatial environment” (Downs & Stea, 1973, p. 9).

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Once again when he reminds us of Thomas S. Kuhn's work on paradigms: "But as Thomas S. Kuhn has stated in the *Structure of Scientific Revolutions*, theory often follows rather than precedes the practical 'shift in paradigm' that he regards as constituting a revolution in most research disciplines."⁹⁵ Perhaps the practice of a new paradigm is coming into place with the theory to follow. Perhaps we as historians of ancient Israel should acknowledge an axiom of philosopher of history, Michael Stanford,

It is therefore not a weakness of history that it generates unending debates. Therefore history is to be seen not as a set of cast-iron facts, but rather as an ongoing conversation with one's fellows about affairs of importance or interest – past, present or future. The discussion can at times become debate, or fierce argument...History is not a concept but an activity – an activity of a unique kind...History is...best understood as an endless debate, constituting an important part of the continuing conversation of mankind [sic].⁹⁶

Contemporary historians then continue to press forward by contemplating increasingly complex questions. Perhaps it is in conversation with the broader discipline of history and philosophy of history that historians of ancient Israel will find acceptable foundations for a new paradigm.⁹⁷ Historiography in general, and historiography of ancient Israel specifically, finds itself at an extended crossroad, in need of an agreed-upon historiographic framework. In establishing this framework, the discipline must acknowledge the tradition upon which it stands; it must acknowledge the corrective challenges that have and continue to modify that tradition; it must push that tradition to ask itself challenging questions; it must reformulate itself to meet its current "depression + conduct disorder but do not have ADHD". This is a more accurate representation of the presentation clinicians must deal with in community settings. Finding "pure" examples of a single diagnosis is uncommon. Therefore, in the current study, a child was listed as having a diagnosis if he/she met the criteria for that diagnosis and regardless of the other diagnoses for which he/she might have qualified.

⁹⁵ Dever, 69, discussing Thomas S. Kuhn, *The Structure of Scientific Revolutions* (3rd ed.; Chicago: University of Chicago Press, 1996).

⁹⁶ Stanford, *An Introduction to the Philosophy of History*, preface, viii.

⁹⁷ As already suggested by Long, "The Future of Israel's Past," passim and Halpern, *The First Historians*, passim.

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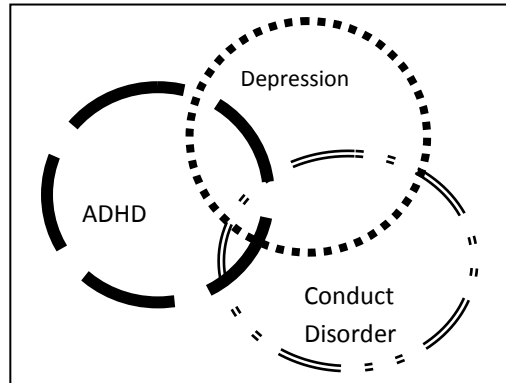


Figure 2. Venn Diagram of Co-Morbid Disorders

In addition to the *PCAS* diagnoses, Internalizing and Externalizing scores from the *Child Behavior Checklist* were used as indicators of “broadband-specific features” (Weiss, Susser, & Catron, 1998) rather than the narrowband-specific features represented by specific diagnostic categories. Measures of Internalizing and Externalizing behaviors function as indicators of what the parent/surrogate views as the primary problem. *T* scores for these two scales were used in analyses. These *T* scores reflect the deviation of all subjects from the mean of their respective normative (age and gender) groups in the same fashion without losing any statistical power (Achenbach, 1991).

Sample References Page

REFERENCES

Able, S. and Ungewickell, E. (1990) Auxilin, a newly identified clathrin-associated Protein in coated Vesicles from bovine brain. *J Cell Biol*, **111**, 19-29.

Bartels, C., Xia, T., Billeter, M., Guntert, P. and Wuthrich, K. (1995) The program XEASY for computer-supported NMR spectral analysis of biological macromolecules. *J Biol NMR*, 1-10.

Bashford, D. and Case, D.A. (2000) Generalized born models of macromolecular solvation effects. *Annu Rev Phys Chem*, **51**, 129-152.

Bayer, P., Arndt, A., Metzger, S., Mahajan, R., Melchior, F., Jaenicke, r. and Becker, J. (1998) structure determination of the small ubiquitin-related modified SUMO-1. *J Mol Biol*, **280**, 275-286.

Beal, R., Deveraux, O., Xia, G., Rechsteiner, M. and Pickart, C. (1996) Surface hydrophobic residues of multiubiquitin chains essential for proteolytic targeting. *Proc Natl Acad Sci U S A*, **93**, 861-866.

Bertolaet, B.L., Clarke, D.J., Wolff, M., Watson, M.H., Henze, M., Divita, G. and Reed, S.I. (2001a) UBA domains mediate protein-protein interactions between two DNA damage-inducible proteins. *J Mol Biol*, **313**, 955-963.

Bertolaet, B.L., Clarke, D.J., Wolff, M., Watson, M.H., Henze, M., Divita, G. and Reed, S.I. (2001b) UBA domains of DNA damage-inducible proteins interact with ubiquitin. *Nat Struct Biol*, **8**, 417-422.

Biederer, T., Volkwein, C. and Sommer, T. (1997) Role of Cue1p in ubiquitination and degradation at the ER surface. *Science*, **278**, 1806-1809.

Bodehausen, G. and Ruben, D.J. (1980) Natural abundance nitrogen-15 NMR by enhanced heteronuclear spectroscopy. *Chemical Physics Letters*, **69**, 185-189.

Bonifacino, J.S. and Traub, L.M. (2003) Signals for Sorting of Transmembrane Proteins to Endosomes and Lysosomes. *Annu Rev Biochem*, **72**, 395-447.

Braunschweiler, L. and Ernest, R.R. (1983) Coherence transfer by isotropic mixing: Application to proton correlation spectroscopy. *Journal of Magnetic Resonance*, **53**, 521-528.

Buchberger, A. (2002) From UBA to UBX: new words in the ubiquitin vocabulary *Trends Cell Biol*, **12**, 216-221.

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Biological Sciences	Biological Sciences	M.S.*, Ph.D.
Biomedical Engineering	Biomedical Engineering	M.S., Ph.D.
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German	German	M.A.*, Ph.D.
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