

## ACKNOWLEDGEMENTS

I want to thank my committee members for their patience, guidance and good humor: my chair Joseph Pitt as well as Ellsworth Fuhrman, Richard Hirsh, Maryanne DeLaet, Matt McAllister, and my chair Joseph Pitt. I am also grateful to David Copeland for his enthusiasm in reading for this project. I would also like to thank all the members of the Science and Technology Studies community – fellow students, professors and administration – for the immeasurable assistance they have given me over the years. I also want to note the two people who always had something to say about this dissertation: Harry Serchuk and Ahmed Bouzid, fellow graduates of STS at Virginia Tech.

I want to acknowledge my family and their life-long support: Michael J., Barbara D., Robert M., Andrea R., and Michele J. Ferro. I want to remember the “newcomers” who I now count as my family: Hugo Atteman and Jennifer Jewell. I want to extend a thank you to Monica Aranguren who originally encouraged me to follow this dream. Finally, I give Marjukka Ollilainen a warm hug of thanks. She challenged me to finally finish this work along with giving her continuing love.

Lastly, I want to dedicate this work to my grandparents, Lew and Marge Ferro, who both passed on just before I defended. They have inspired me throughout my life and would have been very proud.

## TABLE OF CONTENTS

<b>Chapter One - Introduction</b>	1
<b>Chapter Two – Public Science</b>	6
Definitions	6
Newspaper Literature	10
Science and Natural Knowledge	15
Conclusion	26
<b>Chapter Three - Methods for Reading Newspapers</b>	27
<b>Chapter Four - Science and the Press: Nascent Institutions in Colonial America</b>	35
Newspaper Content	36
Advertisements	37
Articles	42
Science in the Context of the News	45
Communication: Cause and Effect	56
Information Diffusion	59
Information Diffusion through the Post	60
Print and Newspapers	63
Readership and the Market	68
Onward	72
<b>Chapter Five - Public Participation and Representative Science</b>	73
The Modes of Science Communication	76
Artifacts	76
Lectures and Shows	77
Oral Discourse	79
Libraries, Zoos, and Museums	81
Schools	82
The Scientific Journal	84
Societies	88
Colonial "Scientists"	92
Primacy in Publication	98
Original Science in the Press	101
Public and Private Electricity	106
Observing Earth and Sky	114
Franklin - Printer/Popularizer	115
<b>Chapter Six - Public Negotiation</b>	120
(or Negotiated Knowledge and Practice: Magic, God, Machine)	
Conflict and Negotiation	122
Personalities and Print	124

Business and Politics	129	
Religion	137	
Local Religious Politics - the Kinnersley Conflict	139	
Whitefield and the "Great Awakening"	141	
Superstition, Enthusiasm and the Catholic Church	145	
In Opposition to Reason	151	
Lightning and Religion	160	
Earth and Sky	164	
Science in Contest	171	
Medical Practice and Conflict in Print	176	
Dr. John Tennent	185	
Smallpox	191	
Smallpox in Boston	193	
Smallpox in Pennsylvania	196	
Smallpox in the South Carolina Gazette	200	
Smallpox in Georgia and Virginia	202	
Smallpox in the Maryland Gazette	202	
Freedom of the Press and Science	205	
<b>Chapter Seven - Public Promotion</b>	<b>208</b>	
Kinnersley's Multifaceted Demonstrations	210	
That's Entertainment	212	
Pragmatic Technology	221	
Public Utility	228	
Private Concern	232	
Authority and Metaphor	235	
Accession of Science	245	
<b>Chapter Eight - Conclusion</b>	<b>248</b>	
<b>References</b>	<b>253</b>	
<b>Primary Newspaper Sources</b>	<b>267</b>	
<b>Appendix A: Annotated Bibliography</b>	<b>268</b>	
<b>Vita</b>	<b>271</b>	
<b>Tables and Figures</b>		
Table 4.1	Aggregate percentage breakdown of categories of science, technology, and medicine in the Pennsylvania Gazette, Virginia Gazette, Maryland Gazette and American Weekly Mercury for the years 1729 to 1765	56
Table 5.1	Extensive Original and reprinted Science Articles in the <u>Pennsylvania Gazette</u>	103
Table 5.2	Incidents of Lightning and Electricity in the <u>Pennsylvania Gazette</u>	110
Table 5.3	Incidents of Lightning and Electricity in the <u>Maryland Gazette</u>	110