Abstract

This dissertation documents two aspects of the development and use of zoom lenses in American film and television from 1946 to 1974. It contributes a detailed account of the impact of Zoomar lenses on early postwar American television, and of the later role of ‘TV Generation’ creative figures who started their careers in television before becoming feature directors.

Chapter 1 introduces the study and defines key terms used throughout. Chapter 2 includes a comprehensive literature review of existing critical and historical approaches to the zoom lens. Chapter 3 outlines methodologies for source selection and analysis. Chapter 4 accounts for the development and technological heritage of the Zoomar lens. Inventive efforts and methods used by its primary inventor, Frank Back, are discussed. Chapter 5 outlines the means by which Back and his business partners marketed the lens. In Chapter 6, the extent to which the lens was used in the American television industry between 1946 and 1956 is demonstrated.

Chapter 7 discusses the American market entry of the Pan Cinor zoom lens, and attempts by Zoomar to use patent law to block it. Chapter 8 discusses the way in which zoom lenses were used in television during the later 1950s and early 1960s, with a particular focus on some of the ‘TV Generation’ directors. Chapter 9 discusses developments in zoom lens technology and in industrial attitudes towards the use of such technology. Chapter 10 discusses the use of the zoom by TV Generation directors in their later feature film work.

The final chapter compares discussions of Robert Altman’s use of the zoom in the early 1970s with the problematizing example of contemporaneous television style. Significant findings are summarized, and areas for future investigation suggested. Specifically, the dissertation demonstrates that early postwar American television is a rich untapped area for future investigations of the roots of film technology, and that from 1946 to 1974 zoom lens development was more gradual, incremental and complex than previously suggested.
Acknowledgements

I am deeply grateful to:

my supervisors, Prof. Steve Neale and Dr. James Lyons, who encouraged me to pursue the topic, and offered support, advice, and encouragement while I did so;

my fellow students and colleagues in the Department of English at the University of Exeter, and beyond – especially those who asked tricky questions, or shared their favourite zoom shot;

the individuals who made time to be interviewed, or shared their expertise: especially Bill Pegler, Chuck Pharis, Norman D. Preston, Robert J. Roth, and William Arbaugh – and to David Gleason for maintaining AmericanRadioHistory.com;

the staff of the archives consulted – especially Heather Smedberg and her colleagues in the Mandeville Special Collections Library at UC San Diego, Dorinda Hartmann at the Wisconsin Center for Film and Theater Research, Dr Mark Quigley at the Archive Research and Study Center at UCLA, and the students who keep the Instructional Media Lab there running smoothly;

the Arts and Humanities Research Council, for funding the project;

my friends and family;

and above all Kiri Thompson.
Contents

Abstract ............................................................................................................................................. 3
Acknowledgements .......................................................................................................................... 5
List of Illustrations ......................................................................................................................... 9
1. Introduction .................................................................................................................................. 13
   Technological Definitions ............................................................................................................. 17
   Terminology ............................................................................................................................... 20
2. Literature Review .................................................................................................................... 23
   ‘Use and Abuse’ ......................................................................................................................... 23
   General Histories ....................................................................................................................... 35
   Beyond ‘Use and Abuse’ ............................................................................................................. 43
3. Research Methodology ............................................................................................................. 51
   Social Histories of Technology ................................................................................................. 51
   Source Selection ........................................................................................................................ 62
   Aesthetic Criticism .................................................................................................................... 67
4. Inventing the Zoomar Lens ...................................................................................................... 73
   Context for Invention: Zoom Technology To 1940 ................................................................. 74
   Frank Back and the Zoomar Lens ............................................................................................. 86
5. Marketing the Zoomar Lens .................................................................................................... 99
   Paramount Newsreel .................................................................................................................. 99
   Network Television: NBC and the Zoomar Lens ................................................................. 106
   Local Stations and Other Networks ......................................................................................... 119
   Sports, News, and Light Entertainment .................................................................................... 126
6. From Puppets to Presidents: Case Studies ............................................................................. 136
   Kukla, Fran, and Ollie .............................................................................................................. 136
   Political Conventions ............................................................................................................... 146
   Beyond Television ..................................................................................................................... 158
   Figures: Chapter 6 ..................................................................................................................... 163
7. Competition: Paillard and the Pan Cinor .............................................................................. 167
   Pan Cinor and Zoomar 16 ......................................................................................................... 171