1.0 Historical Background

From the mid 1960s to the early 1970s, an anthropologist from Pennsylvania State University, Napoleon Chagnon, went to study the Yanomamo tribe of indigenous peoples living in the Amazon forests of southern Venezuela and northern Brazil. He made several field study trips and documented them both with 35mm still photography and 16mm sound film. The cameraman he brought with, Timothy Asch, had previous ethnographic filming experience with Robert Gardner, Margaret Mead, and John Marshall, and was working with the Peabody Museum of Harvard. Chagnon and Asch made 30 short films on the Yanomamo all of which are currently available through the distributor Documentary Educational Resources. The one most widely known is The Ax Fight. The CDROM contains the entire film as well as extensive ancillary data and still photographs.

Chagnon’s work with the Yanomamo is controversial in academic Anthropology communities on several levels and different stories are alleged by various members associated with the studies. In his 2000 book, Darkness in El Dorado, John Tierney claims that Chagnon put the tribes people at risk by introducing a measles vaccination into the population. Chagnon claims that this was done to protect the tribe, but Tierney claims that this was part of the field study to observe the effects of the inoculation on a population that had no previous exposure to measles. Tierney goes so far as to suggest that this was actually a couched government experiment on epidemics and warfare in a pre-contact society, as Chagnon received some funding from the National Science Foundation. Tierney also claims that Chagnon staged some of the scenes to prove his theories of behavior among the tribes, and threshold events which may trigger intertribal hostilities. These allegations of staging events or at least attempting to influence behavior which may’ve resulted in certain desired events goes to the heart of principles of ethnographic filmmaking, highlighting the practice of observational filming to gather data and investigate behavior. Some anthropologists believe this type of observational fieldwork can yield unique and valuable information, but others feel that the introduction of the observer into the subject’s world changes the way they behave, and that the way those results are displayed or represented can be more subjective than scientific.

2.0 Purpose and use of the CDROM

2.1 General

The CDROM does not go into the controversy over authenticity of the original studies. The CDROM was initiated in 1994 by designers from the University of California at Santa Barbara and Timothy Asch. After Asch’s death, the designers asked for Chagnon’s participation on the project and the interactive product is an extension of the film including additional essays and photographs, maps and diagrams. The producers advertise the CDROM as an educational tool.
The CDROM was published by Harcourt Brace and Company in 1997 and although it is no longer available directly through them, it can be purchased via Amazon.com. Harcourt Brace and Company advertised technical support with a toll free phone number, a fax number, and a web site. The website does not list *The Ax Fight* CDROM as a product of Harcourt Brace and Company. A call to the tech support was not made but should be to inquire as to the status and obligation of Harcourt Brace to provide technical support to a legacy product.

### 2.2 Specific

The makers of the CDROM are well aware of the educational potential of this interactive medium. The introduction, written by USC anthropologist Peter Biella is strikingly cognizant of the particulars of the CDROM representation of the film in a digital format. The film is referred to as a “digital copy” and in the introduction Biella states:

> *The Ax Fight* should be seen. Ideally it would be viewed in its original 16mm format but the film is also available on video. Although the entire *Ax Fight* film is stored digitally on this CD and may be viewed on the computer the image is small and focus not ideal. Film or video is far superior for first viewing. However, advantages of the digital version of the film should soon become obvious.

The makers emphasize the potential of the CDROM to carry and display a variety of documents and content in a non-linear interconnection suitable for navigating through in different paths. Again from Biella’s introduction:

> *The Ax Fight* introduces film as the centerpiece of this exercise in anthropological multimedia and discusses how the film’s remarkable structure foreshadows interactive media.

The film’s “remarkable structure” is also as some see it, the film’s greatest fault. Chagnon’s film does not just present the event uninterrupted in real time (which he does) but he goes into dissecting parts of the events and makes assumptions and draws conclusions that some say are not sufficiently proven with his evidence. Biella and Chagnon address the importance and ambiguity of visual material as proof:

> Filmed cultural activities are difficult or impossible to understand when they are viewed once and in real time. Nevertheless complex interpretations can be understood, questioned and reformulated when footage is repeatedly considered by a knowledgeable analyst. The CD-ROM reconsiders the extent to which additional data can resolve the ambiguity of historical documents and the extent to which any theoretical approach can satisfy the objectives and curiosities of interpreters.

However the evidence is read, Chagnon acquired a great quantity of it and a large part of it is presented through the CDROM.
3.0 Description of CDROM

3.1 Contents

The CDROM contains three main types of information. There are 1) texts, 2) photographs and film, and 3) charts, maps and genealogical data. The texts include

*Introduction to Yanomamo Interactive, Peter Biella*
*Ethnographic and Personal Aspects of Filming and Producing the Ax Fight, Napoleon Chagnon*
*Selection and Conflict, Paul Bugos*
*Blow-by-blow descriptions, Gary Seaman*

The film is presented in its entirety, in addition to unedited footage, and still photographs taken by Chagnon during his overall stay with the Yanomamo, as well as during the fight itself.

Chagnon studied the clan and familial relations as he believes that these relations contribute to stability or disorder among the tribes, depending on how Yanomamo social customs are upheld or not. So to this end there are extensive genealogical diagrams, and maps showing groups living and hunting areas.

3.2 Navigation

The CDROM consists of three main windows in which content is displayed. Along the top, bottom and right side are control buttons or drop down menus which allow for navigation and display of content. Users never navigate away from this main display but can draw up content which is presented in the three windows. These windows also allow for navigation within and without, so that one can scroll through content displayed in that window, or click to connect to related content representation in another window which is displayed simultaneously.
4.0 Technical Assessment

The CDROM was created with Macromedia's Director authoring system. Which version of Director is unknown, though by the mid 90s it is possible that designers used Director 6 or 7. The CDROM is made to be used on both Mac and PC platforms. There is no additional software needed to run the CDROM however Quicktime 2.5 is included along with Sound Manager to insure that the audio and movie run adequately. There are instructions in the ReadMe text on installing the versions of these programs (see the ReadMe text below). There are a total of 41 (18 Excel spreadsheets in Excel Data folders) files including all the assets (text, pictures, spreadsheet, and movie files) as well as the Director files themselves. The entire CDROM has a file size of 544MB, though not all of those files could be assessed, the movie itself is approximately 250MB in itself.

CDROM directory on Mac OS X
The files are arranged according to their functions and relation to other similar files. No working, unprotected Director files (.dir) are available, which would allow us to look at the original make-up (the Director “stage”, “score”, “cast list” and Lingo code) of the final display and interoperability functions. These .dir files are compacted and protected into Director “movies” (not to be confused with a QuickTime or Real delivery file). These movies and original asset files once compacted and protected have file extensions .dxr, .cxt, and .cst.

The Windows version has two different programs running at different screen resolutions or compression rates (16bit, and 32 bit). Director final “movies” (the
presentable, interactive program that one navigates through) need to be rendered on separate platforms (PC and Mac) to be readable by those separate systems. Xtras (helper files which assist in internal Director functionality) exist for both the Mac and PC versions and that is normal. The only question is whether those files are needed in a later version of the program, say if the files were to be opened and updated in Director 10, or the newest version of the application. This could not be done without the original, pre-compacted files however.

The hardware requirements for the CDROM are as follows:

For Windows

Version 3.1 or Windows 95
486/33MHz or higher processor (486/66MHz recommended)
8M RAM (16 MB recommended)
2X CD-ROM drive
Sound Card
SVGA 256 color monitor

For Mac

OS 7 or greater
33MHz 68LC040 or greater processor
8MB or more of RAM with 4MB or more application RAM (16MB recommended)
2X CD-ROM drive
256 color monitor

The CDROM was tested on the following computers:

Windows 98
512 MB RAM, using 1.5MB of physical memory
and QuickTime 4
CDROM was not read

Windows 2000
Intel Pentium III CPU (1200MHz)
260 MB RAM
QuickTime 5
CDROM was read and performed without glitches
needed installation of QuickTime 2.1 which comes on the CDROM

Mac OS 9 (native)
No processing speed, memory information
CDROM was read and performed without glitches

Mac OS 9 (emulated off of OS X)
Mac OS X
Power PC G4
Dual 867MHz Processors
512MB
QuickTime 6.2
CDROM was read and performed without glitches
There are no particular behaviors that use variable display speed, or react to rate of user response.

The movie playback is built to run at multiple frame rates for detailed analysis. Movie playback was rough and erratic on the Windows 95 when it was played from the disk. However when contents were copied to desktop, the movie ran much smoother. On all platforms and operating systems, the files could be transferred off of disk, but the Director files (.dxr) would not open in Director 8 because they have been protected.

5.0 Conclusion

The CDROM appears to be stable and shows above average operability across both platforms running various operating systems. The content as presented is not distorted or missing pieces, there is no drop out of functionality. This is perhaps due to the basic goal of the CDROM to present, with the exception of the film, static information in measured, determined sequences. Unlike CDROMs for or from the art sector, this CDROM aims only to present the data of research and uses the capabilities of interconnectivity inherent in the CDROM technology, as opposed to emphasizing programming capabilities which use chance, user response or other coding strategies. The layout of the graphics and interface are clearly marked, and instructions are present on the CDROM as well as in a hard copy version, in a book that accompanies the disk. Given that the CDROM is still commercially available, and that the product was driven by a University, the product’s level of persistence is increased. The University could be contacted to determine whether the original files still exist somewhere and if updating to a newer version of Director (and Quicktime) could be done if need be.
Yanomamö Interactive Instructions - Mac

You will need to have Quicktime™ installed on your system prior to running Yanomamö. Most Macs will already have this. There is no installation of the program itself necessary. Run the program directly from the CD.

The “System Stuff” folder included on the CD contains the latest versions of Apple’s Quicktime™ (version 2.5) and Sound Manager (version 3.2.1) extensions. If you are not sure if you already have these versions and don’t know how to check, go ahead and install these.

To Install Quicktime™ and Sound Manager:
Drag the System Stuff folder to your desktop.
Restart your computer while holding down the Shift key (extensions off).
Open the System Stuff folder and your startup disk.
Select all of the items in System Stuff and drag them to the icon of your System Folder (don’t open the System Folder).
NOTE: Do not install the Quicktime Power Plug unless you have a PowerPC processor.
Click OK when prompted.
Restart your computer normally.

Last minute feature:
When a person has been selected you can click on the small personal statistics area to go directly to the detailed “people screen” for that person.