

What is the Digital Revolution?

Part One

With the increasing capabilities of personal computers the hype of professional production for amateur prices passes from one media to another. After print publishing and audio the moving picture now is ready for this challenge. But as the discussion about desktop print publishing (DTP) was a simple one of old vs. new technology the situation in the movies today is more complex. The term of a Digital Revolution is associated with such different topics like Star Wars, Blair Witch Project, Dogma 95, DV, DVD, DivX or respectively the internet in general.

There are different ways to structure the discussion according to aspects like production/distribution, aesthetics/economics or - the way I will do it - low and high budget. The reason for this is that though the blurring between low and high budget production seems to be a central topic in the discussion of digital cinema to address this issue seems to be more important in the low budget field, while digital technology in the high budget world first of all means postrealistic FX. There are two Digital Revolutions because there are two dreams: The amateurs dreaming of movie-making instead of just watching and the professionals dreaming of new creative horizons.

In the early 90's Francis Coppola published his now notorious vision that one day a little girl from Ohio would pick up her father's video camera and shoot a marvelous movie. As it seems low budget productions are more accepted today than they ever were. Blair Witch Project has become the most profitable movie ever with a budget of \$ 22.000 and a total gross of \$ 140 mio in US cinemas alone. Thomas Vinterberg's The Celebration - shot with an amateur camcorder - won the Jury's Special Award in Cannes in 1998. The direct roots of this development can be traced back for about ten years, when in the early 90s a new wave of ultra low budget movies like El Mariachi or The Living End rose. The budgets of these movies were basically reduced to the - as it seems - not to be dispensed costs for filmmaterial but they enjoyed an international distribution.

The second reason for the current hype came from the computer industry. While Robert Rodriguez was shooting *El Mariachi* Apple introduced in May 1991 its QuickTime software which made it possible to watch and edit timebased data on a personal computer without dedicated hardware. Though the videos were hardly bigger than stamps the software extension kept video and audio in sync and guaranteed a playback according to the defined frame rate independent from the CPUs speed. These clips were first utilized on multimedia-CD-ROMs more as gadgets than real movies. At the same time dedicated editing systems like AVID came to the film and TV industry and established a new style of editing. But neither early QuickTime nor the AVID improved the situation for the independent cinema. QuickTime was a closed system with low quality and the AVID was not only more convenient but also much more expensive than a traditional editing suite. Only with the introduction of DV (Digital Video, miniDV) as a consumer recording and compression format and IEEE 1394 (aka FireWire, i.LINK, ...) as an interface between video recording and postproduction machines the idea to do a final cut on a personal computer became reasonable.

DV provided an image quality that was good enough that even TV professionals started to use the tiny cameras. The miniDV tape with its length of 66 mm hardly resembles any more what was known as a video tape. It utilizes a compression ratio of 1:5 and so called chroma subsampling that means that color information is recorded with a lower resolution than the luminance signal of the image. So compared with the seemingly lossless 1:1,7 compression of Digital Betacam (as the professional standard) DV can only be regarded as "semi-professional". But the size and price of the cameras often make the decision to shoot on DV reasonable. Beside of the still astonishing picture quality the idea of lossless digital postproduction made DV popular. As the information is initially digitized in the camera it can easily be copied to the computer where the film can be mastered with (virtually) no generation loss. IEEE 1394 initially was developed by Apple in order to succeed the SCSI interface that connected their computers with peripherals like hard discs and scanners. Today it is hard to estimate if Sony knew what they were really doing when they decided to integrate this computer interface into their new products. But Apple used the chance to start its marketing campaign for what they called Desktop Video (DTV).



Chances are
there'll be a million
movies made from
this remarkable
new book.

Apple iBook

Seeing this logical development it is astonishing that none of the acclaimed independent productions of the 90's was shot on DV. DV supporters often refer to the superior image and sound quality of the format what does not quite show the crux of the matter. Compared to 16mm, which according to Jon Jost will be replaced soon by the new format, the DV image does not look too good at all. On the other side the improvements as against the old consumer standard Hi8 are obvious but hardly revolutionary. More important seems to be the increased tolerance of low quality. In a media culture there is a huge demand for discernable aesthetic concepts and one possibility is a simple recourse to old techniques with specific quality degradations.

Most of the 90's indies used 16mm or even 35mm film - but not due to quality reasons but as an expression of high demands. The only film that was at least partly shot on video was Blair Witch Project that contained old-fashioned Hi8 footage. Those movies that were shot digitally - like Winterberg's The Celebration or von Trier's The Idiots - were made by established directors that could have afforded to shot on film. As a matter of fact the Dogma 95-movement which is often associated with DV was never intended to be about DV. The 9th rule of the Vow of Chastity even demands "35mm Academy" as the format of choice. All professional productions transferred their footage to professional systems like AVID, DigiBeta or HDTV for post-production. But the blurring of phenomena like the tremendous success of Blair Witch Project and the Dogma-movies being celebrated in Cannes created a hype that found it's icons in

pictures like Lars von Trier with his Sony VX 1000 on the set of The Idiots.



Lars von Trier

To my knowledge until today there is no movie of independent and digital original that enjoyed a successful distribution in the cinemas. Probably that day will come. But until then it's worth to have a look at the ideas behind this movement. It's most obvious characteristic is the promise of egalitarian production structures. Decreasing prices and increasing capabilities of production tools enable everybody to produce "real" movies.

One of the latest examples for this idea is the short film 405 by Jeremy Hunt and Bruce Branit. The movie shows the emergency landing of a passenger plane on an LA freeway and contains state of the art 3D effects. It was entirely produced on amateur equipment without any budget and released on the authors' website. Shortly after its initial release in June 2000 the film was moved to a commercial internet portal and within two month seen by about 1 mio people.



405

The success of 405 suggests that the cinema of the future will mainly take place on the internet as a wide open, pluralistic distribution channel. But the most successful films online usually refer to offline media to attain a value. The big range of movies listed on the Star Wars fansite The Force are movies between homage and parody on George Lucas space cycle. Movies that are truly independent are hardly noticed in a media that is built on links. Eeveo, a company that started with the aim to establish an online archive where amateurs could show each other their short video clips, meanwhile concentrates on licensing its software to major companies. "Let's say you're North Face or REI or whatever brand, Coca-Cola, you say 'I want to have hundreds of people creating their own versions of a Coca-Cola commercial'. The only thing you have to make sure you can see a Coca-Cola can of bottle in the clip. And you can do the same thing with North Face, you have to make sure that you see a North Face logo at one point, that's it." (Olivier Zitoun, eeeo) So the original eeeo-site resembles more a multimedia flea market but has nothing to do with film as a profession.

A movie portal like IFILM only provides webspace and streaming know-how but rarely pays for content. Branit and Hunt who are both working in the FX industry know that the internet only can be first step of their self-realisation. "Our ultimate goal would be to develop, write, direct, and produce anything cool, like commercials, feature films, or music videos," Branit is quoted. Beside of the fact that independent directors can hardly finance

their productions through the internet, digital technology even decreases the durability of movies. A film that is not perceived immediately after its completion can be regarded as lost. The constantly changing technical standards and the speed of information cause a compulsion to simultaneousness that contradicts any kind of avant garde.

For decades the independent cineasts have been laying their claim to the cinema contrary to the traditional production structures. This humanist-marxist claim to production tools for everybody seems to be fulfilled today. Precisely in this historic moment the cinema reveals how deep it is rooted in an industrial culture, whose fetish is the serial.

But the serial nature of the cinema does not lie in the production of repeating plots - as the opponents of the film industry are telling us - but in the mass reception of its products. Hitchcock's metaphor of the audience as a musical instrument (an organ) to be played shows that the cinema as an industrial model does not produce movies but viewers.

The cineproletariat did not obtain its production tools by fighting but as a gift from the entertainment industry but when it comes to the gates of distribution still stands before locked doors. What looks at first sight like an oligarchic conspiracy or just a Pyrric Victory in a running fight finally turns out to be the real power of the cinema and a reason for its role as the leading media of the 20th century. Narrow distribution channels cause cultural identity. The cinema can not only win when it enters the pluralistic realm of the broadband.

Cinema distribution remains an eye of a needle and 35 mm is its global standard. Though digital projectors are on their way to take over they will only pay off for years in the high budget field to show even more "copies" of blockbusters in multiplex theatres. (The same applies for digital HD cameras like Sonys HDW-F900.) The initial 35 mm print of a video production is about \$ 30.000 which is a lot compared to the \$ 1.000 many of the ultra low budget productions cost right now. At this distribution gate Next Wave Films has took its stand. Next Wave is a company that doesn't look at authors' scripts anymore but only at rough cut movies. "Were are seeking films which we believe have a theatrical audience," says Peter Broderick, president of Next Wave Films. The chosen movies are provided with additional funding for professional post-production and marketing. As with digital technology shooting an independent movie first

of all requires time instead of money the production risk is passed over from the producer to the author. For that reason it is natural that producers like Broderick celebrate DV.

The author/director should keep in mind that since the 50's there have always been possibilities to make movies beyond the film industry. But today it becomes more and more important to stand out against the crowd and when traditional values like mobility and creativity are occupied by the marketing of media and technology companies the independents have to redefine themselves.

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