

Discussion of Paper by L. E. Davidson

Mr. Victor: Mr. Chairman, I have held the belief for some time that until money enough can be obtained in rental from the non-theatrical users of motion pictures it is not going to amount to an industry. I have talked to ministers and schoolmen upon the subject of prices for films, and it has been somewhat difficult to convince them that they have to pay almost as much, in the way of rent, for a reel of film, as, say, a third-rate theater—say, \$2 per reel.

Nevertheless, it is a certainty that until the day comes when the non-theatrical user of motion pictures is able to pay enough rental for film, it won't pay to produce pictures, and they will be compelled to borrow pictures from the theater and, of course, those pictures are not entirely suitable for the church and school.

Now, we talk about correlating films to the school curriculum. It is a tremendous task to accomplish that, and how many millions it will run into I do not know, but it is a certainty that until the church and school realizes they have to pay for the service from these films, we never can produce the films they want and need, and I think the whole secret of the success of the non-theatrical film rests on that one thing alone—that is, an earning power which will enable us to manufacture the character of film they want.

Mr. Perkins: I just came in to hear this valuable discussion. Perhaps you will be interested in the work we are doing in the Department of Agriculture, which is almost entirely non-theatrical.

The Department of Agriculture, as you know, is a very important department. It is much more widespread and does a great many more things than the ordinary man realizes. It is composed of 14 large bureaus. Public Roads, Weather Bureau, the Forest Service, Animal Industry, Chemistry, States Relation Service, Plant Industry, Soils, Markets, Crop Estimates, Entomology, Biological Survey, Farm Management and Publications.

The Department of Agriculture has about 18,000 people in the field, probably half of whom are doing some sort of extension work or regulatory work. Probably half of the half spoken of have a use for pictures in furthering the work of the Department.

We began making pictures in the Department of Agriculture about seven years ago. We are still making them. We have about 130 subjects now, and have about 800 reels in circulation. We regard the motion picture as a very effective ally in the extension work.

For instance, we recently produced a picture called "Out of the Shadows," showing the relation between animal tuberculosis and human tuberculosis.

About two months ago, this picture was taken to Vermont, and shown before the Vermont State Legislature which was considering whether or not it should appropriate \$400,000 to cooperate with the Federal Government in eradicating animal tuberculosis. The picture was shown in the Senate Chamber at the State House, and I have a letter from the inspector in charge there who says that the picture

had a great deal to do with putting over the appropriation in that State.

Today I received another letter that happened to talk of the same picture; he said he had heard many lectures on animal tuberculosis, and that there never had been any questions raised by the audience afterwards, but that he recently saw this picture and afterwards a half-dozen farmers went to the men in charge and asked them how they could have their cattle tested for tuberculosis.

These are merely isolated instances. We have many of them to show that the motion picture is very effective in our work. It is doubly effective for the reason that many of the people the Department tries to reach never have had much to do with motion pictures. Most of them live out in the country where they do not have "movies." We are getting to them by means of the portable projector, largely; sometimes equipped with a generator outfit on a truck; sometimes with a generator on an automobile engine.

The main thing is that we are getting to them, and we are going to do that increasingly in the future.

I haven't any doubt whatever but what the Department of Agriculture is going to continue to use motion pictures for a great many years, probably permanently, in this work.

We want to work just as closely with the commercial end of the game as we can. We don't want to trespass on the commercial man's ground, and we expect him to work with us. We are not making any pictures that will hurt the business of the theatrical man. We make only pictures that apply to the work of the Department of Agriculture in some way. We try to make them as entertaining as we can, but it seems to me the Government should not interfere with the commercial industry by making pictures that will cut down the market for the commercial man's product.

On the other hand, we have an arrangement that some people might construe as interfering with the commercial man's business. We offer prints of our pictures at the manufacturing charge to all distributors, to cooperating state institutions, anybody with a legitimate use for them. We don't care whether he charges admission to see them or not, if he will get Department facts and Department knowledge—that is, Government facts and Government knowledge—before the people. We regard him as a very good ally. If we sell him prints, he can charge to see them, but, of course, we won't guarantee he will have exclusive use. At the same time, our free distribution among our own people goes on.

Now, the Government, in a larger sense, is doing a great deal of motion picture work at the present time. It is pretty well scattered. I counted up about a year ago and found there were 17 different organizations in the Government doing motion picture work. I don't know whether you are interested in that subject. If so, I could give you a list of the bureaus and departments doing motion picture work. The Signal Corps of the War Department has millions of feet of negative which 100 years from now, if it lasts that long, will be invaluable. It will be a complete history of:

the world war. You can imagine how valuable that would be if you think how much you would prize a print showing George Washington crossing the Delaware, or the surrender of Lee at Appomattox. These Signal Corps films will be of that value, and of that character, 100 years from now. The Public Health Service is going into films. The Reclamation Service has some films dealing with use of reclaimed land. The Bureau of Mines has its own pictures. The National Park Service has the same. I believe the War College has some. The Bureau of Navigation of the Navy Department has some. The War Risk Bureau has one or two films. The Children's Bureau of the Department of Labor has some, and so has the Women's Bureau. The Bureau of Education has a large quantity of films.

In practically all of these cases the films have been produced by commercial companies at a contract price. However, in the case of the Signal Corps and the other divisions of the War Department, those were made by their own photographers.

I am often very much interested in thinking how far the Government ought to go in motion picture. I have no doubt whatever that the Government should make use of the tremendous power of motion pictures to get over things that should be got over. I do not doubt that advances will be made in the future.

We, of course, are very much interested in the non-theatrical field that Mr. Davidson has just been talking about. We find it very advantageous sometimes to show pictures in certain communities and churches and schools. They are very effective allies.

There is nothing more I wish to say, but if anyone has any question I can answer I should be mighty pleased to do what I can. (Applause.)

Mr. Perkins: All the war negatives are in good shape. I was in the Signal Corps laboratory about two weeks ago on some other business, and saw how wonderfully they were taking care of these negatives. That is, the war negatives.

The Signal Corps has photographers who are taking pictures of many things of historic interest around Washington. For instance, the day I was down there they were running off a picture made at the time of the Inauguration of President Harding. That, of course, applies only to the Government end of it. I don't believe they would take pictures of anything that was not strictly governmental.

A bill was introduced in the Congress late in the last session providing that the Government should establish an agency, or authorize an agency now existing, to preserve copies of every film of great interest.

Mr. Perkins: In that bill the agency suggested was the new National Museum, which is part of the Smithsonian Institution.

Mr. Richardson: What means, if any, is the Government taking to preserve films of historic interest? I have had that matter up with the Government myself through the President's office two or three times.

Mr. Perkins: You mean films of historic interest relating to the war?

Mr. Richardson: Relating to anything, what would you give today to see a film of Abraham Lincoln?

Mr. Perkins: A whole lot.

Mr. Richardson: And 100 years from now people will give a lot to see films of Harding and Wilson and things of that character.

Mr. Perkins: All the war negatives are in good shape. I was down there about two weeks ago on some other business, and saw how wonderfully they were taking care of these negatives. That is, the war negatives.

A Member: How long do you think negatives will stay fixed and usable if it is put in good shape and preserved?

Mr. Victor: I think I can answer that. I saw some negatives some time ago of McKinley's Inauguration and Roosevelt's Inauguration, and McKinley's funeral, and some scenes taken before that, and those are about 20 years old, some of them, and they were in perfect condition so far as the emulsion was concerned, but I found, to my intense surprise, the camera work they had in those days was perfectly rotten. (Laughter.)

Mr. Richter: Wasn't the film shrunken pretty badly?

Mr. Victor: Not very much. With a step-printer it didn't make much difference. I printed up about 8 reels of those pictures and some of them were the very earliest made by the Edison Company.

Mr. Richter: I might say that I have had some experience with old negatives, and I find that the celluloid base in some of those old negatives seems to crack and crinkle up and the sprocket holes run right out when you try to run it through the machine. I think there is room for improvement on the part of the chemist here. Camphor, as you know, which was used for the tempering of the nitrate of cellulose, has been replaced. You don't notice the camphor odor so strong in your printing rooms now. That has been replaced by a synthetic substitute for camphor, and it may interest you to know that recent tests show that the rate at which motion picture film burns when this synthetic substitute is used instead of camphor, is less than 50%. In other words, the camphor in the nitrite of cellulose furnished a large part of the combustible properties of the nitrite of cellulose.

That suggests another thing; if a substitute can be used for camphor, and make the film much less inflammable, why could not some additional foreign substance, which will not be of harm, be used that will put the fire out?

Every chemist knows that the trinitrate used for making up this material is not gun-cotton. It has not the high nitrification; it does not contain near oxygen enough to burn with sufficient force.

If they will do this; if they will find substitutes for camphor, which they have, and for these other materials which leaves the film in that brittle condition, the probabilities are that a negative will last very much longer than does the camphor saturated, nitrite of cellulose films last.

Furthermore, if those engaged in research will give their time

and attention to the development of a proper base, nitrite of cellulose, or what not, properly impregnated with the proper chemicals for preservation as well, we cannot only reduce the inflammability, but we can take care of this matter of the future.

Of course the shrinkage of the coating formed by the gelatine and the nitrite of cellulose is something that can be taken care of, provided you keep the humidity off of the place in which it is stored right.

I don't have much confidence in a negative being printable 100 years from now, even if it is printable 20 years from now, on the old chemical basis.

Dr. Mott: That is a matter of chemical reaction. We know that chemical action doubles every time you raise the temperature 15 degrees centigrade. The solution of the whole matter is to keep the film in a freezing temperature. You undoubtedly will be able to keep it for 100 years under those conditions, if you have already kept it twenty.

Mr. Mayer: A hundred years is only a long period relatively speaking. We may want to keep them a great deal longer than that, and I believe we do. I wonder if it is not possible, and probable, that we will come in the near future, to discover some way of duplicating negatives so correctly and clearly that every 25 or 50 years a picture may be transferred into a new negative, and in that way keep the thing in perpetuity, because if you depend on the original negative some day or other, whether it is 100 or 500 years, it is coming to the end of its usefulness.