

***DWIE JOASIE (1935 R.)***

**W REŻ. MIECZYŚŁAWA KRAWICZA.**

**RESTAURACJA DŹWIĘKU FILMOWEGO**

**JAKO TWÓRCZY PROCES ODKRYWANIA KONCEPCJI**

**ARTYSTYCZNEJ DŹWIĘKU W DZIELE FILMOWYM**

**ABSTRACT**

Research on sound restoration in the Polish feature film *The Two Joans (Dwie Joasie)* from 1935 directed by Mieczysław Krawicz presented in this doctoral dissertation, are based on the author's experience gained during the project *Conservation and digitization of pre-war feature films at the Polish National Film Archive in Warsaw*<sup>1</sup> (short name: the *Nitrofilm* project) in 2010-2015. Within this project, the most valuable part of the pre-war collection of Polish feature films preserved on original nitrate base prints has been subjected to digitization and digital restoration. It is worth emphasizing that the nitrate source materials were heavily damaged release prints, which significantly increased the level of difficulty of restoration works. Cooperation with the National Film Archive – Audiovisual Institute<sup>2</sup> on the *Nitrofilm* project led to the development and implementation of an innovative, proprietary sound-on-film decoding system. The system enabled the translation of a graphic representation of the optical soundtrack stored in the form of high resolution (4K) image files, created in the process of scanning films into digital sound<sup>3</sup>.

The aim of the doctoral thesis was to consider that all the work related to the digitization and restoration of sound in the film is, first of all, an artistic task, consisting of following the artistic concept of the work properly and preserving its aesthetic values. The description of conceptual work and the implementation of restoration works on sound in the film *The Two Joans* served as an example of the original approach to this task. The intention of this dissertation was to formulate theoretical foundations, and then to indicate their practical use. This idea was reflected in the construction of the work, especially in the order of the issues discussed.

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<sup>1</sup> More information about the project can be found at [www.nitrofilm.pl](http://www.nitrofilm.pl).

<sup>2</sup> As a result of the merger of the National Film Archive with the Audiovisual Institute in 2017, a new institution was established, which full name is: National Film Archive – Audiovisual Institute ([www.fina.gov.pl](http://www.fina.gov.pl)).

<sup>3</sup> As a result of further development works with the involvement of the author, the system adopted the name: Image to Sound Tools. More can be found at [www.imagetosound.com](http://www.imagetosound.com).

The PhD thesis consists of four chapters covering several thematic topics. The first chapter concentrates on theoretical issues related to the art restoration and terminology. The author undertakes the task of adapting the assumptions of Cesare Brandi's *Theory of restoration* to the grounds of sound restoration in audiovisual works. It also refers to the content of the *Charter of Film Restoration* published in 2010 by the International Federation of Film Archives.

The next chapter of the work is devoted to historical issues. The historical and cultural context plays a very important role in shaping the right approach to the restoration of the work. One should take into account not only the period in which the work was created, but also what happened to the work during its existence and in what situation it is now. From the point of view of the work's restoration, one cannot neglect the history of sound technology development: recording systems, recording and post-production technics. This knowledge helps in making decisions at various stages of the restoration, above all in the field of digitization.

The third chapter deals with the aesthetics of the pre-war sound. The author presented a detailed sound analysis in the film *The Two Joans* in it. The conclusions drawn from the analysis were used as a preparation for reading the main part of the dissertation – the fourth chapter, dedicated to the practical side of the film's sound restoration. In this part, the author described the various stages of preparatory and restoration work in the film *The Two Joans* taking into account the technical and psychoacoustic aspects relevant to the sound restoration.

In the course of the sound restoration described in chapter 4, digitization plays a special role – the process commencing the restoration from the technical side. Paying attention to the possibility of making mistakes at this stage of work has a special justification. Improperly carried out digitization brings negative consequences with it: it results in lowering the quality of further restoration processes, and in the extreme situation it may even damage or destroy the media. In the case of pre-war films preserved on nitrate films, digitization is a very difficult process and requires the use of specialized tools. The author introduces the innovative concept of using the Image to Sound Tools sound-on-films decoding technology as part of the *Nitrofilm* project.

The choice of the film *The Two Joans* from among fifteen feature films previously restored by the author was dictated by several reasons. First of all – the artistic ones. It belongs to the genre of musical comedy, a genre that is very characteristic of the work of the Polish pre-war cinema. Some of the greatest Polish stars of the then screen appeared in the main roles: Jadwiga Smosarska and Franciszek Brodniewicz. It is also worth paying attention to the time of the production of the film – the mid-1930s, the period extremely interesting for the sound

film in Poland, in which the skills of sound creation as an element of the film art were shaped. Secondly – historical considerations. The film *The Two Joans* as one of the few survived entirely on the original pre-war nitrate films. Finally, thirdly – for technical reasons. The film *The Two Joans* as the only film within the *Nitrofilm* project was scanned using the wet gate technology. During the work on this film, all the elements of the complex restoration workflow, provided for in the *Nitrofilm* project, were applied. Not without significance is the fact that this movie has been restored last. During restoration works, all previously acquired skills and experience were used.

The difficulty of dealing with the conservation and restoration of audiovisual works should be considered in the context of the interdisciplinary nature of the field of art. Even the broad knowledge and experience in the production or post-production of images or sound, knowledge of technology use in the past and now (although necessary) do not guarantee success in this task. The sound restoration in the presented example includes knowledge and skills in the fields of: psychoacoustics, digital technology, aesthetics and sound engineering in the film. The most important and at the same time the most difficult task in the work on the restoration is its rediscovery and understanding, the awareness of its features that make them unique, and then the process of restoring with respect for its original aesthetic and historical value. This means continuous difficult and responsible decision-making regarding the methods of operation, the tools used, the order and intensity of the restoration procedures. It depends not only on the ability to use the digital tools, but on understanding what the restoration of the work of art in fact is. According to the author, the audiovisual media restoration in its complex nature and current education profile is between the competence of filmmakers and conservator-restorers.

The purpose of restoration treatments is to restore the work of art to its aesthetic values and original form. In the case of a sound restoration, the particular importance of searching for authentic aesthetics of film sound and the process of digitization should be emphasized. Restoration activities should be preceded by a detailed sound analysis from the aesthetic point of view, based on which it will be possible to create a work organization scheme. When planning the restoration work, the digitization process should be treated as its integral part. During the restoration of film works, there is a special situation in which the original media is replaced by its digital copy. Both in the case of the sound restoration in the film *The Two Joans*, and in other pre-war films, the preservation of the original dynamic sound relationships and the standardization of sound volume during the projection were particularly important aspects. These are extremely important features due to the preservation of the unique character of pre-

war sound. The author also draws attention to the need to verify individual stages of restoration works in a restoration studio and a professional mixing theatre in accordance with the assumptions presented in the *Charter of Film Restoration*.