WHEN THE CURTAIN CLOSES: The Potential of Strike Research
By Paul Brunner

Published in *TD&T*, Vol. 48  No. 3 (summer 2012)

*Theatre Design & Technology*, the journal for design and production professionals in the performing arts and entertainment industry, is published four times a year by United States Institute for Theatre Technology. For information about joining USITT or to purchase back issues of *TD&T*, please contact the USITT office:

USITT
315 South Crouse Avenue, Suite 200
Syracuse, NY 13210
tel: 800-93-USITT (800-938-7488)
tel: 315-463-6463
fax: 315-463-6525
e-mail: info@office.usitt.org
web: www.usitt.org

Copyright 2012 United States Institute for Theatre Technology, Inc.
The Potential of Strike Research

Once safely removed from a batten, a unit is carried to the scenic studio at Cincinnati Conservatory of Music for disassembly. Notice the hard hats.
Where did you learn how to strike a stage production? Was it through on-the-job training, trial by fire, a textbook, or a training seminar? Perhaps the time has come for strike to be studied in a more systematic way. To explore the subject of strike, I devised an exploratory research project to begin looking for answers.

Ideally, this preliminary research will provide a context that will lead to the identification of further areas of study. This project was supported by an Exploratory Travel Grant from the New Frontiers in the Arts and Humanities initiative at Indiana University-Bloomington. The support provided travel funding to collect information about strike operations at various theatres.

The fundamental goals of the project included:
1. Learn how the subject of strike is addressed in stagecraft textbooks;
2. Define strike for theatre;
3. Observe a number of strikes and identify in broad terms the differences and similarities among them;
4. Identify specific avenues for further study.

Five productions were included in this study. *Of Mice and Men* (the opera) at the University of Cincinnati's College-Conservatory of Music (CCM), *Company* at Ball State University (BSU), *Holes* at Indiana Repertory Theatre (IRT), *Rigoletto* at the University of Illinois at Urbana-Champaign (UI), and *MacBeth Did It* at Crown Point (Indiana) High School (CPHS). These provide a spectrum of theatres ranging from high school to regional within close proximity to Indiana University-Bloomington. The productions were primarily academic and regionally accessible for observations. Each venue graciously permitted observation and allowed photographs of its strike.

Each strike varied in terms of budget, venue size, and the expertise of the available labor.

How Is Strike Discussed in Textbooks?

It is important to identify a working definition to distinguish strike from terms like changeover and load-out. What do stagecraft textbooks have to say about strike? *Stagecraft for Nonprofessionals* by Frederick Buerki offers this definition: “for removing scenery, props, and lights from the stage at the end of an act or a performance (Buerki 1955, 160). *Stage Scenery, Its Construction and Rigging* defines strike as “the operation of dismantling all scenery and stripping it of hardware preparatory to storing it” (Gillette 1981, 426). Willard F. Bellman’s *Scene Design, Stage Lighting, Sound, Costume & Makeup, A Scenographic Approach* provides the most extensive discussion. It separates strike into three possible outcomes: taking the set apart for subsequent remounting; destroying the set at the end of the run; or taking down a set prior to building up the next scene (Bellman 1983, 155). While other textbooks devoted to stagecraft and theatrical production sometimes mention strike, the discussion is limited.

Colleagues Bruce Brockman, Kirk Domer, Zachary Stevenson, Mark Engler, and Verda Beth Martell were more helpful. A few of their definitions of strike include:
1. organized chaos (a popular response from technical directors);
2. the disassembly, removal, and restoration or disposal of all elements of a production;
3. restoring the theatre to a neutral working order;
4. putting everything away;
5. the process of cutting up scenery into the largest pieces allowable by the refuse company;
6. the organized dismantling and disposal of production elements.

A synthesis of these comments and quotations produces a working definition of strike for this article: the organized process of dismantling and removing all production elements (scenery, costumes, lighting, sound, properties) and restoring
the performance venue to a neutral state. This definition suggests that strike is a complicated and multi-step affair. However, while numerous textbooks are devoted to stagecraft and the production of theatre, the time and attention given to strike is very small.

Observations: Scheduling

According to technical director Chris Fretts, IRT used to schedule strike immediately following its final performance on Saturday night. Today, IRT avoids an overnight strike by beginning the morning after the final performance (most often a Sunday) and working through the day. This typical schedule was observed on November 7, 2010: The morning call is 8:30 a.m. to 1:00 p.m., followed by a one-hour lunch break. Work continues from 2:00 p.m. to 5:00 p.m., followed by a dinner break. If needed, work continues during a 6:00 p.m. to 9:00 p.m. call. All workers are non-union staff, some of which are casual hourly. The strike for Holes included six full-time staff and four to six other workers who all stayed until 5:00 p.m.

The crew transported most of the scenery directly to a thirty-yard dumpster. Fretts said that the time and effort necessary to reclaim the wood at a regional theatre is cost prohibitive. Recently, IRT began to divert its strike waste from the landfill by hiring a local company that recycles construction waste to remove it. IRT stores some stock platforms for reuse, as well as its automation equipment.

On November 6 and 7, the strike for Company at BSU began directly after the final evening performance and stopped at midnight. Faculty and staff chose this model to avoid having students working through the night. The following morning, strike call was at 9:00 a.m. and continued until lighting strike completed that afternoon. (For Company, the scenery strike took about six hours.) The crew included technical theatre students as well as the production’s cast. They were divided into three groups organized as shifts who worked predetermined numbers of hours to fulfill academic requirements. The strike shifts tore apart the scenery, and a majority of the materials will be reused in future stage sets.

The strikes at UI and CCM both took place immediately following Sunday matinees. UI’s strike, on November 14, 2010, ended at 10:00 p.m., but CCM’s (May 16, 2010) lasted until roughly 2:00 a.m. Working late was necessary at CCM because the set was very large. Included were numerous flown units, some of which were quite sizable. There was also a music performance loading in early Monday morning. UI had sixty student technicians and performers on strike call while CCM had sixty-eight. Both of these large crews were divided into teams who then followed the predetermined strike plans.

Crown Point High School (CPHS) concentrated its strike work as an after-school activity beginning on the Monday following the final performance. Prior to the students’ arrival at 3:00 p.m. on Monday November 21, adult volunteers removed stage properties, set-mounted lighting practicals, and other fragile items. Student technicians and performers worked for three hours, dismantling scenery and striking lighting equipment under the supervision of the drama teacher and the adults. Strike took several days, but almost all the scenery materials were saved for reuse.

Stage Scenery, Its Construction and Rigging states that it is commonplace for strike to take place immediately following a final performance because the crews that have been responsible for handling the scenery during the run of the production are already in the theatre (Gillette 1981, 426). The suggestion is that those who are most familiar with the scenery can most efficiently dismantle it. The technical directors at UI and CCM agree. Their decisions were not necessarily dependent upon their venues’ production calendars. They found it advantageous to use the student crew already on the premises, rather than dealing with the difficulties inherent when requiring students to attend a strike call on a day following the final performance. IRT, the single repertory theatre observed, held its strike the day following the final performance, but practically speaking, a paid crew has more at stake if they do not show up. Worker momentum may play a role in strike schedules.

There may be other practical considerations to help schedule strike. According to Bloomberg Businessweek, as many as five times more mistakes and twenty percent more accidents occur during night shifts than during the day (Hazelwood 2003). Further, the crews found at schools are generally not very experienced and face a great possibility of making mistakes or having accidents. It may be necessary do more study of shift work to understand the influence of nighttime hours on strike.

Observations: Labor and Organization

Each theatre organized its labor in a similar manner, despite the disparate sizes of the crews. IRT had a crew of ten workers, while the academic theatres had significantly larger crews. CCM and UI also benefited from having students who were completing course requirements. In these large crews, the students were divided into teams ranging from two to seven members, supervised by a team leader. The leaders followed instructions taken directly from a strike plan established for the production. In each of the five strikes, there was a single manager overseeing all the crews and the workflow. Graduate technical direction students were in charge of the strikes at UI and CCM, while faculty or staff supervised the other venues.

A crew of more than sixty people may appear to be an overabundance of workers; however, the strikes at UI and CCM did move smoothly. When questions or problems arose, every crew member knew whom to seek out for answers. A clear chain of command was evident. All the strikes involved considerable amounts of shouting, a necessity when giving instructions in the noisy workplace that strike typically creates. An observer unfamiliar with strike may find this communication disrespectful, when it is actually common.
There is nothing static about a strike. The work environments for all five theatres changed frequently, with the possibility of new hazards constantly appearing.

All five venues ran strike in the same order. The props, electrical fixtures, and sound equipment were removed from the set. At the same time, masking and other soft goods were flown out or otherwise cleared away from the scenery. Next, the set was either dismantled on stage or broken down into manageable units and moved to an adjacent space. Once the stage was clear of scenery, lighting booms and battens were struck.

**Observations: Safety**

There is nothing static about a strike. The work environments for all five theatres changed frequently, with the possibility of new hazards constantly appearing. Safety procedures varied between organizations. At CCM, each of the more than forty workers present on stage wore a hard hat. Very few, however, wore safety glasses. Workers dismantling scenery in CCM’s scenic studio did wear safety glasses. Two of the five strike crews used no personal-protection equipment (i.e., safety glasses, hard hats, or gloves). Two possible explanations for the discrepancies in safety practices in these venues might be the general lack of information about strike in textbooks as well as individual managerial attitudes about safety.

**Observations: Workplace Atmosphere**

The workplace atmosphere during each strike was unique to the institution, but there were some similarities. Each strike’s character, or attitude, was unique. This could be a function of the size and complexity of scenery (the mass of work to be completed) or managerial styles. BSU, CPHS, and IRT were rel-
atively calm, relaxed, and, at times, even informal. The strikes at CCM and UI appeared more formal and structured and at times pressured. These observations deserve further consideration and study through surveys and similar means.

Observations: Salvaging Materials
IRT, CCM, and UI reported immense challenges in saving materials for reuse. These challenges stem from a single source: labor. Salvaging materials from scenery requires crew time. Because student labor is perceived to be free, academic theatres can leverage their workers to salvage more. A professional theatre, paying an hourly rate for labor, does not achieve a financial offset by saving the materials for reuse.

The time to clean wood and steel for reuse can be extensive. Simple specialty tools and fasteners can help, but they don’t hold all the answers. The recent increase in programming and conversations about sustainable theatre production at conferences such as the Annual USITT Conference & Stage Expo, Southeastern Theatre Conference, LDI, Earth Matters on Stage, and the 2011 Prague Quadrennial indicates a growing concern for theatre’s ecological impact on the community and nature at large. Further study of strike may lead to systematic approaches for salvaging materials, resulting in less scenery going into landfills. For now, theatres individually develop their methods and should consider how they may disseminate their techniques.

The five strike plans included some attention to material flow. They identified the general flow of work, the order in which certain tasks had to be completed, and the crew (or crews) responsible for each task. Typically, these plans were written down and disseminated to crew leaders. CCM and UI both had large crews to manage, but the crews seemed to

Lighting strike at University of Illinois begins immediately once the stage was clear of scenery.

The orchestra pit has been lowered for strike at the University of Illinois at Urbana-Champaign. Temporary safety devices, brightly colored stanchions, and rope provide a visual and physical barrier for this common fall hazard.
The five strike plans... identified the general flow of work, the order in which certain tasks had to be completed, and the crew (or crews) responsible for each task. At UI and CCM, scenery was broken down into manageable units and transported to the scenic studios for dismantling. Dividing the work into a space separate from the stage opened floor space for disassembly to continue on stage more rapidly. Another benefit of this approach is the availability of better lighting in scenic studios for performing detailed work with tools and hardware.

At BSU and CPHS, the scenery was largely dismantled on stage, quickly reducing the sets to scrap wood. IRT carried most large units directly to the dumpster. Regardless of method, the use of predetermined plans for the flow of materials promoted more efficient work calls.

Preliminary Outcomes

The lack of standard industry practices devoted to strike may explain, in part, why adherence to common industry safety regulations differs greatly from theatre to theatre. Another difference is the extent to which materials are salvaged. The theatres that do salvage materials for reuse in subsequent stage sets seem to consider budget factors and the cost of labor more important than sustainability. The atmosphere, or workplace culture, might also play a significant role in strike operations. The sort of workplace environment fostered during strike will affect how workers are motivated. Perhaps a strike can progress faster merely by changing a managerial approach.

Judging by the reactions of the theatres involved in this study, there is widespread interest in learning how other theatres handle strike. This is an area of research with an eager audience. Strike activities should be recognized as a complicated phase in every stage production. Analyzing strike on a broader scale will ultimately promote a better understanding of its role in production operations. Strike may also be central for addressing the growing concern of more sustainable theatre production.

A detailed and well-devised strike plan promotes both efficiency and safety. Workplace culture plays a factor in the goals and overall composition of a work, influenced by managerial approaches and their relationship to human be-
Understanding the nature of strike will lead to new tactics by management and more thorough academic approaches. This understanding of strike within a broader production context will lead to recommendations of new practices that will shape productions, and may even uncover entirely new methods for how theatre is created.

Paul Brunner is the faculty technical director and head of theatre technology in Indiana University’s Department of Theatre & Drama. He will help lead the 2015 USA/USITT Prague Quadrennial Exhibits as technical director and exhibit project coordinator. He is co-commissioner for USITT’s Technical Production Commission and is co-chair of the Broadway Green Alliance’s Education Committee.

Sources Cited

Special thanks to Sterling Shelton at Cincinnati Conservatory of Music, Curtis Mortimore at Ball State University, Verda Beth Martell and Tom Korder at University of Illinois at Urbana-Champaign, Chris Fretts at Indiana Repertory Theatre, and Kit Degenhart at Crown Point High School for allowing access to their facilities. Thank you to Ellen Jones who assisted in the development of this article.

Editor’s Note: This article is published under the guidelines of TD&T’s juried submission process. It has undergone blind peer review and has been judged to meet the highest standards of scholarly writing. Juried article submission guidelines are available on the TD&T website at tdt.usitt.org/Guidelines.aspx.