

# Building the Next Generation Resurrecting the Hammer Throw in the USA

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by G. Martin Bingisser

## ABSTRACT

*After dominating the hammer throw in the first six editions of the Olympic Games, the USA experienced a decline both in terms of international results and domestic participation. Medals at the top level became relatively scarce (one gold, one silver and four bronzes at the Olympics over more than 90 years) and the event all but disappeared from school and youth competitions. However, since the 1990s grass roots participation has been revived due to a number of factors and actions, including the personal efforts of the 1956 Olympic Champion Harold Connolly. The growth in the number of youth hammer throwers has been at least 400% in the last twenty years and the number of elite performers over 65m has increased at least fivefold. At the junior level, this has translated into international success (three medals, including two golds at the 2008 and 2010 IAAF World Junior Championships). The author, an active hammer thrower himself, draws on statistical analysis and survey results to chart the progress and explain the processes at work in this development. He then provides five practical recommendations on how federations or other organisations in other countries can increase participation in the hammer throw and other similarly affected events.*

## AUTHOR

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## Introduction

**F**or the last third of the twentieth century, European athletes utterly dominated the international hammer throwing scene. But in recent years a number of factors have contributed to a decline of this dominance. Across the Atlantic Ocean, however, an opposing trend can be witnessed. The United States has seen unprecedented growth among hammer throwers over the last decade

After giving a brief overview of the opposing trends in Europe and America, this case study will 1) isolate and identify the factors that contributed to the growth of American youth and junior hammer throwing, and 2) provide recommendations on how federations or other organisations can increase participation in the hammer throw and other similarly affected events. As the women's hammer throw has only been an Olympic discipline since 2000, much of the statistical data referenced in this study focuses

on the men's event for which a larger collection of data is available. However the lessons learned can be applied equally to both genders, and also to other countries and events.

**European Hammer Throwing:  
Tradition and Resurgence**

European hammer throwing reached its pinnacle in the 1980s. In 1983, the 60 best male hammers throwers in the world all came from European countries. While the continent continues to show dominance in the hammer, in 2010 only 43 of the top 60 throwers in the world were from Europe (Figure 1).

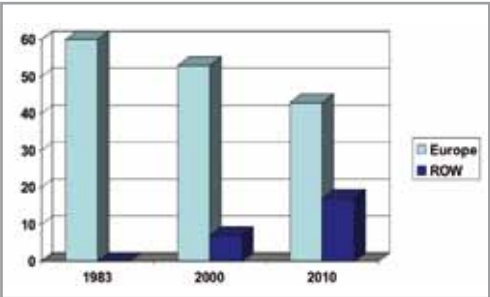


Figure 1: Europeans among the world's top 60 hammer throwers vs. the rest of the world (ROW) (Statistics compiled by Ian Tempest.)

This decline in European dominance can be primarily attributed to two major factors. First, technical and training advances made in Europe during the 1970s and 1980s slowly began penetrating the other continents and elevated their level of competitive performance. Secondly, at the same time, the depth of European hammer throwing declined. During this period the depth of the international rankings remained virtually unchanged as shown in Figure 2; only the makeup of countries represented altered. This means that not as many Europeans are achieving the same marks as they were thirty years ago.

This decline can also be viewed at a more granular level by examining statistics from individual countries. For example, in Germany only one of the country's all-time top 15 male throwers has thrown his best since 2000.1 And, as Germany's southern neighbour Switzerland never has been a hammer throwing powerhouse, the numbers are even bleaker there. The tenth best thrower in Switzerland threw over 58m in the mid-1990s, but for the past few years the tenth best thrower has not broken 45m. and at the 2011 Swiss national championships the bronze medal was won with just 43.98m. At the junior level it has not

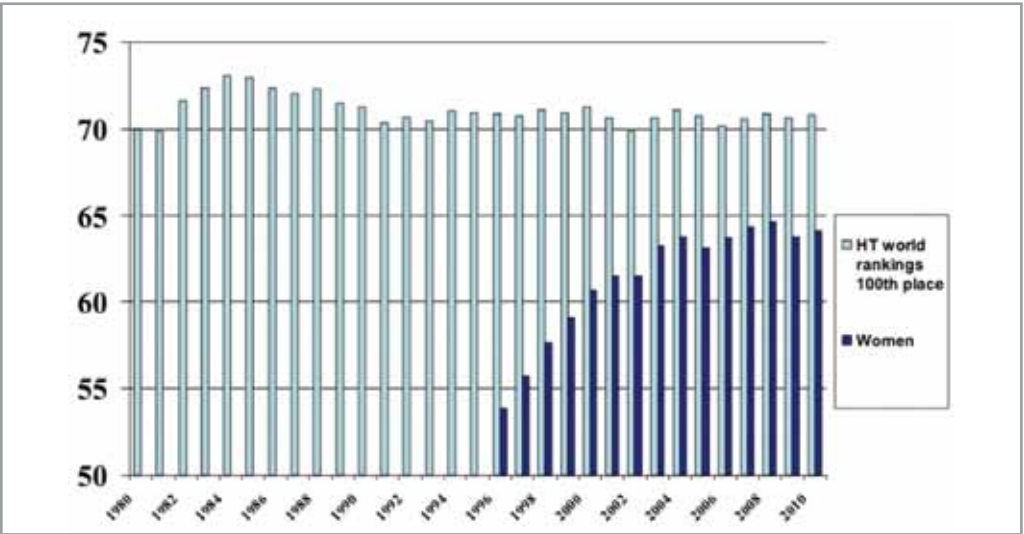


Figure 2: Results of the world's 100th best hammer throwing since 1980 (Statistics compiled by Ian Tempest.)

been much better, with just two boys competing in the 2011 Swiss under-16 championships and only four boys participating in the under-18 championships.<sup>2</sup>

## **American Hammer Throwing: Tradition and Resurgence**

American hammer throwing has also experienced a dominance and decline as we have witnessed recently in Europe. The USA won the first six Olympic gold medals and captured a total of 14 medals in the hammer throw at the first six Olympics. In the following 30 years, it took only four additional medals (one gold, four bronze). Since 1956 its sole medal was silver as the host of the 1996 Olympic Games.<sup>3</sup> During this time it did not win any World Championship medals, or, until 2008, any medals at the IAAF World Junior or IAAF World Youth Championships.

A similar decline also occurred at the youth level. At the start of the twentieth century more than a dozen states included the hammer throw as an official event in high school competition. A century later, only Rhode Island, the country's smallest state, continued to stage the hammer throw officially at high school competitions.

Beginning in the late 1990s, this trend reversed at both the youth and elite level. While the top tier of American throwers still have not been able to consistently qualify for international finals, their level has improved remarkably. Five of the all-time top ten male throwers threw their personal best since 2000, with two others also throwing their best in the late 1990s.<sup>4</sup>

The growth at the youth level is even more significant. From beginning to elite throwers, the numbers outlined in the findings below show growth of at least 400% at all performance levels in the last twenty years. Some analysis of this data has shown the number of throwers over 50m increased nearly eight-fold during this time, and elite throwers over 65m increased at least fivefold. Unlike the senior throwers, juniors have already seen the

increase in results translate into international success, taking home three medals (2 gold, 1 silver) from the 2008 and 2010 IAAF World Junior Championships.

## **Methods**

Two main methods were used to analyse the cause of growth in American youth hammer throwing. First, annual national performance lists were compiled to help identify the extent of the growth in different geographic locations. Second, online surveys and follow-up interviews were conducted with youth coaches across the United States to identify what brought new coaches to the sport and how they developed their coaching knowledge.

### **Statistical analysis**

Statistician Bob Gourley has compiled performance lists for the top American high school hammer throwers for decades. Since American youth and junior sports are primarily organised through the school system, this data provides the best overview of youth athletics. While there is no age limit, boys normally attend high school until their 18th or 19th year and throw a 12 pound (5.45 kg) implement.

For this analysis, Gourley provided year-end performance lists for the twenty year period from 1992 to 2011 identifying all high school throwers that had surpassed 150-feet (45.72m) during the course of the season. This information was then parsed and sorted by performance level, the number of states represented, and the depth of results in each state.

As a baseline, national shot put results for the 10-year period 2002-2011 were also analysed to determine if the growth was equally present in other throwing events in the country.

### **Surveys and interviews**

After conducting the statistical analysis, feedback was solicited from youth coaches (and self-coached youth athletes) via an online survey, including both open- and closed-ended questions.<sup>5</sup> In addition to identifying information such as name, location, number

of years coaching both hammer and athletics, and number of youth hammer throwers in their training group, the following substantive questions were asked:

- Where did you first hear that the hammer throw was a youth sport with many opportunities available?
- What made you decide to start coaching the hammer throw?
- What is the primary motivation for you and your athletes?
- What are the biggest obstacles that you think the hammer throw must overcome to grow further at the youth level?
- How did you learn to coach the hammer throw?

Links to the survey were posted on the four most popular hammer throwing-related websites in the United States reaching an estimated 3,000 weekly fans, athletes, and coaches. In addition, Gourley distributed the link to the survey directly to his mailing list of more than 100 youth hammer coaches. In total, 51 survey responses representing feedback from 16 different states were received. The majority of the responses came from youth coaches, while eight responses came from self-coached youth athletes.

## Findings and Discussion

Analysis of the data showed that four main elements contributed to the rise of youth hammer throwing over the last 10-15 years in the USA. First, publicity for the event was a key driver in increasing the profile of the event at the youth level. Second, an increased number of competitions allowed new athletes in new locations to try the sport. Third, coaching programmes and initiatives ensured that new coaches came to the event and beginning coaches could find the resources to learn about it. Finally, additional programmes helped make sure that athletes then had all the resources they needed to develop into better throwers. The following sections outline the findings related to each of these areas of development.



### ***Publicity: The rise of the internet brings the hammer throw to new people***

It is no coincidence that the rise of the hammer throw in America has correlated almost directly to the rise in popularity of the Internet. Gourley has long compiled a list of national rankings, drawing on his connections with coaches across the country to source his data. As the internet developed, it became easier for him to distribute this list via email to anyone that requested. In 1995, John Dye founded the regional youth track and field website Dyestat and began posting national rankings for other events in 1997.<sup>6</sup> Gourley's national rankings were also posted on Dyestat soon after.

1956 Olympic Champion Harold Connolly founded Hammerthrow.org near the end of the century as a way for him to post resources and information about the event, including technical articles and explanations. Then, in 2000, HSHammer.com was founded to not only provide easy access to Gourley's rankings, but also as an outlet to post news, results, and additional information about youth hammer throwing.

The proliferation of hammer throwing information online gave the event a boost in several ways. First, it helped train coaches. The vast majority (72.5%) of the respondents to the coaches' survey stated that they used Internet resources to further their coaching education.

Also, coaches that did not already know the hammer throw existed as a youth event listed the Internet as the second most popular way they learned that competition opportunities existed. Only a personal introduction to the event ranked higher. In this way the Internet allowed athletes and coaches to see that the hammer throw actually existed as a youth event, find where they could compete locally, connect with other throwers nearby, and easily measure themselves against their competitors nationwide. In an event where throwers are often geographically isolated, these factors provided a strong boost by creating a close-knit hammer throwing community.

***Increased opportunities: Fast, consistent growth triggered by geographic expansion***

From the mid-1990s to the mid-2000s, the number of competitions outside of Rhode Island also increased substantially. Thanks to the lobbying efforts by Connolly, the hammer throw was gradually included in the Junior Olympic programme of the national athletics federation

(USATF), in which youth athletes compete as members of athletics clubs during the summer season that takes place after the school year is finished. Prior to 1999, the event was not included at any level of the multi-tiered programme. After gaining exhibition status, it was added to competitions at the national, regional, and local levels. This provided opportunities for throwers in every state to watch and compete in it. Simultaneously, the small increase in throwers encouraged high school competitions to add the hammer throw as an event. It is no coincidence that this period of growth in competitions coincided with a strong growth in participation and performance levels.

The statistical analysis of Gourley's data showed that the growth in the number of hammer throwers and the improvement in their results has been extremely fast and relatively consistent over the past two decades at both intermediate and advanced levels. The number of throwers over 150-feet (45.72m), 50m, 55m, 60m, and 65m was measured each year, and

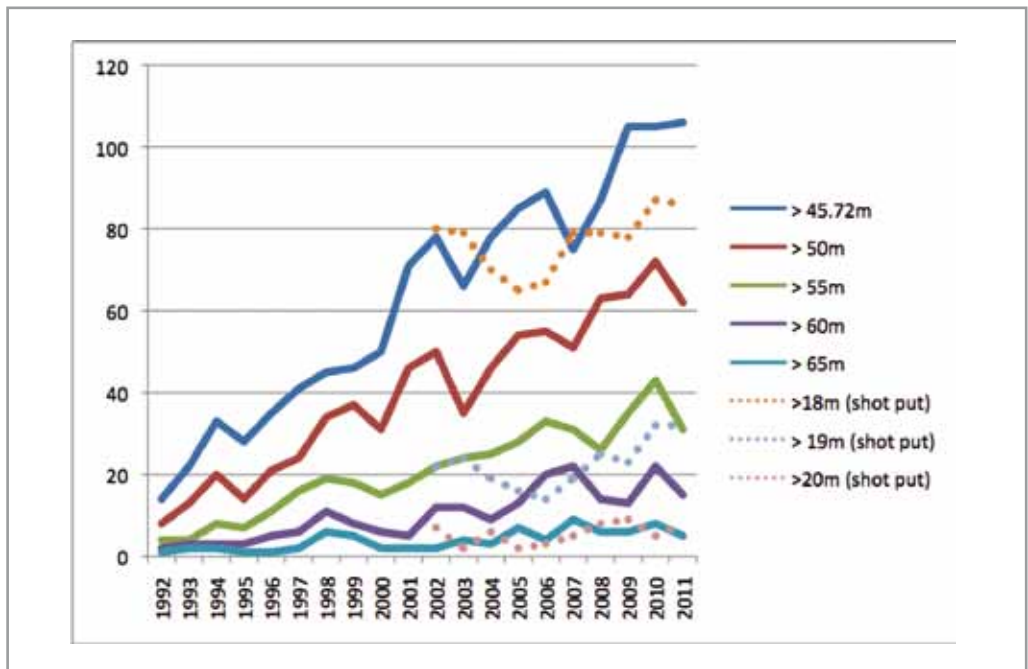


Figure 3: Historical development of American hammer throwing and shot put results (Data provided by Bob Gourley (Hammer) and Jack Shepard (Shot Put).)

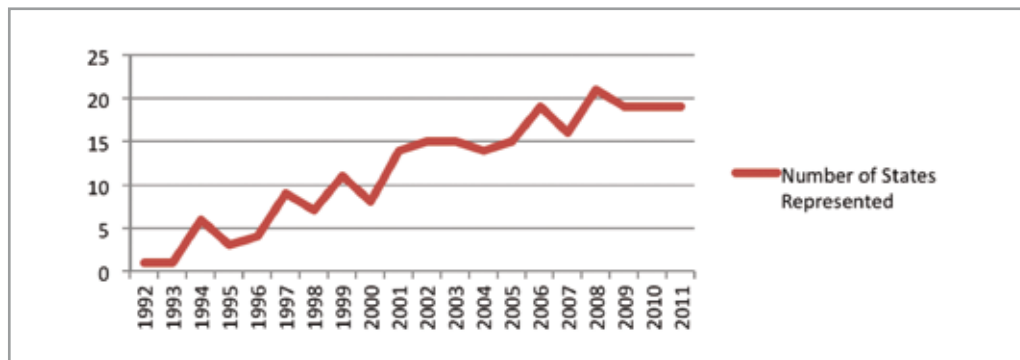


Figure 4: The number of US states with a male high school hammer thrower over 45.72m

the data within each range showed a continued increase from 1992 to 2011 (Figure 3).

From 1992 to 2001, there was also a substantial increase in the number of states that had a thrower over 45.72m, as shown in Figure 4. This number jumped from one to 14 during this period. Then, from 2002 to 2011, the number remained relatively stable, climbing from 15 to 19 states. During this time, the total number of throwers over 45.72m continued to grow, demonstrating that the growth was no longer due to new states having hammer throwers, but to the existing states establishing more depth in the event.

It is important to note that this increase in numbers and improvement in results were not due to an overall increase in throwers in all disciplines. A look at the American shot putters who threw 18m, 19m, and 20m with the 5.45kg shot put over the past decade shows that the number of throwers remained relatively stable at all levels during this time.

Statistical analysis also confirms that the improvement in results at the youth level is almost entirely due to the spread and growth of the hammer throw outside of Rhode Island. While one might hypothesize that the level of Rhode Island throwers would also rise as they were pushed by new competition across the country, this was not the case. Though there

was modest growth in Rhode Island, much of it occurred in the 1990s and the numbers have since slightly regressed, causing a negative correlation between the number of American hammer throwers and the number of Rhode Island throwers over the past decade. Further, the number of Rhode Islanders throwing over 45.72m was identical in both 1994 and 2010, showing the relative stability of their performance level.

The growth outside of Rhode Island, on the other hand, has a near perfect 0.98 correlation to the growth across the United States over the past two decades. As shown in Figure 5, during the 1992-1993 season no throwers from outside of Rhode Island threw over 45.72m. In comparison, the last three seasons (2008-2011) have seen an average of 74 throwers from outside of Rhode Island better that mark from an average of 19 other states each year. Non-Rhode Island throwers now comprise nearly three-quarters of those athletes over 50m.

Over the last few years the number of competitions has levelled off, yet performances continue to improve outside of Rhode Island. This is likely due to one of two factors: 1) the fact that these competitions have grown in popularity since being initially introduced or 2) that the athletes and coaches who started the sport because of these new competitions have improved as they gained experience.



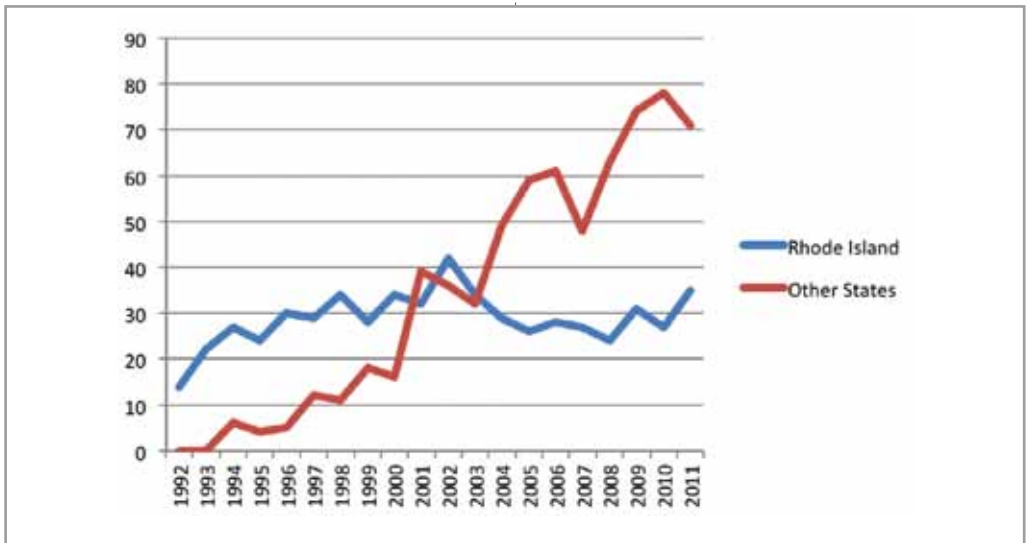


Figure 5: The number of US hammer throwers in Rhode Island vs. the number of throwers from other states that surpassed 45.72m each season

### **Strengthened coaching: New coaches were already familiar with the hammer throw**

The survey also produced some interesting findings. The majority of responding coaches (66%) have groups of five or fewer hammer throwers. The largest number of coaches also already had experience with the hammer throw, often as former hammer throwers themselves. More than 40% were already aware of the competition opportunities available and began coaching the event once more competition opportunities arose for their athletes. However, nearly half of the coaches were new to athletics and had been coaching for less than ten years. Of all these, 55% had been coaching the hammer throw as long as they had been coaching other events. In other words, these coaches have been hammer coaches during their whole coaching career and were not coaches recruited from other events. As mentioned above, 72.5% of the respondent coaches also used Internet resources to further their coaching education.

Despite the fact that most coaches already had a connection to the hammer, recruitment was still helpful. The use of the Internet to

disseminate information proved to be an inexpensive and easy method to reach a large audience. As mentioned above, Harold Conolly is the most significant individual in the American youth hammer throwing resurgence. In addition to his lobbying efforts, he produced a short manual for hammer throwers and coaches, which he gave away at free clinics across the country and distributed, along with additional information, through his website. He also mailed free printed copies to those who requested it. Many of the coaches cited this manual as a key source of learning about the event, including coaches who already knew the hammer. He also organised coaching clinics across the country and an annual elite hammer coaching clinic at the US Olympic Training Center. All of these activities worked to increase both the number and competence of coaches.

### **Developing Athletes: Facilities and governing body support remain big issues**

There was also an effort in the final area of athlete development. By nature, athlete development must be done on a more local level and therefore it is more difficult for this to be

coordinated nationally. Connolly began raising money to expose the top young talents to new ideas beginning in the early 2000s. After organising training camps for elite junior throwers and their coaches, he then sent two high school champions to train and learn from top coaches in Hungary in 2004. After that he instituted an annual youth grant programme that helped reimburse training expenses incurred by other talented throwers. Numerous coaches also worked hands-on with their athletes to develop them further. However, in the survey, this was the area where most coaches felt work still needed to be done.

In their survey responses, coaches listed that the major obstacles facing the hammer throw as the same ones that faced the event two decades ago. The top response given by more than a third of respondents pointed to the lack of hammer throw training facilities as the largest obstacle. The second most popular theme, cited by more than a quarter of respondents, was that further growth is being prevented by the failure of state high school federations and other governing bodies to sanction the hammer throw as an official event.

Both of these issues are prevalent across the globe at both youth and elite levels. Facilities can be expensive to build and current facilities are also being lost as participation decreases for the hammer throw and other throwing events.

## Conclusion and Recommendations

The unprecedented growth of hammer throwing in the USA, particularly among young throwers, was due to a unique combination of factors that might not necessarily exist elsewhere. But nevertheless, lessons can be learned from their success and these principles can be applied to not only other countries, but also other events seeking to increase participation. Namely, national federations and other organisations looking to improve an event's participation and results can focus their efforts on the following:

1. **Publicise - Utilising the Internet as a means of promoting the event** will give it exposure both within the throwing community and to the athletics community at large. The use of existing federation websites and other independent websites should be leveraged first to tap into existing audiences. Social media can also be used to develop an event-specific community.
2. **Increase Opportunities - Increase the number of youth competitive opportunities.** Federations can help in this regard by ensuring that the hammer throw is included in more competitions for youth throwers, and preferably at a visible time and location. The hammer throw has been excluded from the Diamond League, and similar exclusion issues also exist on the national level. For example, in Switzerland the hammer throw is only included as an event in the top division of the Swiss Club Championships. Since every club needs to be represented in each event, by including the hammer throw all clubs would encourage new athletes to try, and potentially like, the hammer throw. Similar measures could also be considered in other countries to increase participation in the hammer throw and other events by exposing new athletes to the sport.
3. **Strengthen Coaching - Use outreach efforts to make sure that current and former athletes continue to stay involved in the sport as coaches** as these individuals are most likely to support growth in the event. The fact that most coaches in the USA were already very familiar with the hammer throw and opportunities for youth throwers means that the best strategy for recruiting hammer throw coaches is to target former throwers that have drifted away from the sport. In Switzerland, for example, only two of the all-time top 20 hammer throwers are currently active as coaches (and one of these coaches is still currently training). Throwers often lose contact with the sport as they focus on their careers, family, etc. Retaining these individuals will likely be more profit-



able than recruiting new coaches to learn the hammer throw and also should serve as a model for other events.

4. Provide Educational Support - This applies to coaches and athletes. Utilise low costs means such as the Internet. This model can likely be replicated even more successfully in other countries since the vast majority of coaching information available online for all events is in English. If federations developed similar manuals in the local language, it would increase resources available to the many coaches who are not proficient in English.
5. Develop Athletes - Assist local clubs and cities in retaining appropriate training facilities and building new training facilities. National federations should assist local clubs in defending current facilities from being converted to other uses. Additional financial grants can also be used to help cover training expenses of young talents and provide a motivational goal.

The beauty of this approach to developing an event is that success breeds more success because the cycle never ends. As athletes begin to succeed in the event, they will generate more publicity, thus beginning the cycle again at a new higher level.

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5. A full version of the survey is best viewed online since it offers interactive features. See <http://www.mbingisser.com/2012/03/us-youth-hammer-throw-survey/>
6. An overview of the history of Dyestat is available at <http://dyetrack.com/2012/11/02/thanks-for-the-memories-2/>.