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USING LETTERPRESS PROOF MACHINES IN PRINT MAKING

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ABSTRACT
Johannes Gutenberg's development of the movable type and printing press in Europe in the 15th century led to a technical and cultural revolution. Taking proofs of works to be printed has been an ongoing practice since these early days of printing. Proofreading has become a method to prevent errors and obtain customer approval. While the first proofs were made on the printing machine, they were later made on simple hand presses, and in 1909, the first letterpress proof printing machine was developed by Robert Vandercook. With the integration of computers into design and printing, letterpress printing was replaced by offset printing. Letterpress proof press and machines that were out of use were adopted by artists, designers, and educational institutions in Europe and especially in USA. Thus, a new experimental, creative, educational, and artistic usage method was born. The transformation of the old letterpress proof presses, a quality system application in the pre-press process, into an art and education technique is a unique example. In Turkey, such a usage method does not yet exist. The aim of this study, which uses qualitative research methods, is to conduct the outputs in the field of printmaking with letterpress proof printing machines in the world, while making an examination of the technique from past to present, and to introduce this method and its machines, which do not exist in Turkey, and to guide those who are interested. The transformation of letterpress printing in the historical process, the artists, workshops, and institutions that produce and train in the field of printing making with letterpress proof printing machines were examined and exemplified. Literature research was conducted on the subject. In the conclusion section, an evaluation and recommendation were made.

Keywords: *Printmaking, Proof Press, Letterpress, Graphic Design, Typography.*

ÖZGÜN BASKIDA TİPO PROVA BASKI MAKİNALARININ KULLANIMI

ÖZ
Avrupa’da 15. yüzyılda da Johannes Gutenberg’in hareketli hurufat ve baskı presini geliştirmesi teknik ve kültürel devrime yol açmıştır. Basılacak işlerden prova almak basımcılığın ilk günlerinden beri süre gelen bir uygulamasıdır. Prova baskı, hataların engellenmesi ve müşteri onayının alınması için kullanılan bir yöntem olmuştur. İlk provalar baskı makinasında alınırken sonrasında basit el tezgahlarında alınmıştır. 1909'da Robert Vandercook tarafından ilk tipo prova baskı makinası geliştirmiştir. Bilgisayarın tasarım ve basımcılığa entegre oluşuyla tipo baskı yerini ofset baskıya bırakmıştır. Avrupa ve özellikle ABD’de kullanım dışı kalan tipo prova tezgâhları ve makinaları sanatçılar, tasarımcılar ve eğitim kurumları tarafından sahiplenilmiştir. Baskı öncesi sürecindeki bir kalite sistemi uygulaması olan eski tipo prova baskı makinalarının özgün baskıda sahiplenilerek sanat ve eğitim tekniğine dönüşmesin yegâne örnektir. Böylelikle deneysel, yaratıcı, eğitici ve sanatsal yeni bir kullanım yöntemi doğmuştur. Türkiye özelinde ise böyle bir kullanım yöntemi henüz

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bulunmamaktadır. Nitel araştırma yöntemlerinin kullanıldığı bu çalışmanın amacı dünyada tipo prova baskı makinası ile gerçekleşen özgün baskı alanındaki çıktıları araştırarak Türkiye'de hiç olmayan bu yöntemi ve makinalarını tanıtmak, ilgililerine yol göstermek ve geçmişten günümüze teknikle ile ilgili bir inceleme yapmaktır. Tipo baskının tarih sürecindeki dönüşümü, tipo prova baskı makinaları, özgün baskı alanında üretim ve eğitim yapan sanatçılar, atölyeler ve kurumlar incelenmiştir ve örneklenmiştir. Konuya dair literatür araştırması yapılmıştır. Sonuç bölümünde bir değerlendirme ve öneri ortaya çıkarılmıştır.

Anahtar Kelimeler: *Özgün Baskı, Prova Baskı, Tipo Baskı, Grafik Tasarım, Tipografi.*

INTRODUCTION

Johannes Gutenberg's development of the movable type and printing press in Europe in the 15th century led to a technical and cultural revolution. Taking proofs of works to be printed is a practice that has been around since printing. Proofing has become a method used to prevent errors and obtain customer approval. The first proofs were made on the printing machine, and later on hand equipment. The first letterpress proof printing machine was developed by Robert Vandercook in 1909. In this way, the printing machines were not occupied, and the results were visible before production.

Traditionally, printing is the process of transferring the designs prepared on the computer to paper and its derivative printing substrates, the raw material of which is mainly cellulose, using plate and ink and reproducing them in high quantities. Traditional printing is today a production method with sheet-fed offset, web offset, screen printing, rotogravure and flexo printing machines. In the modern sense, printing is the process of reproducing and producing designs prepared in a computer environment in low quantities by transferring ink to paper and chemical-derived printing materials without the need for a plate, or by creating forms or traces without the use of ink. Contemporary printing is today a production method with digital printing, laser printing and 3D printing machines. In artistic terms, printing is the process of transferring designs prepared manually or with computer support to paper and its derivative printing substrates, whose raw materials are mainly cellulose and cotton, through hand-made or ready-made wooden, plastic, metal and stone plates and reproducing them in limited quantities. In the artistic printing method, gravure presses, lithography presses, screen printing machines, letterpress and offset proof machines, hand presses and hand tools are used. All printing methods require a preparation process called pre-press and production process called post-press (İpek, 2023: 21).

Digital printing has opened a new dimension in printing, offset printing is still the most used commercial printing method today. Offset printing was replaced by letterpress printing after the computer revolution in desktop publishing. Interested people and enthusiasts are trying to preserve the typography heritage, equipment, and machines of letterpress printing, which has a 500-year history and started to be abandoned in the mid-1980s. In this sense, letterpress printing, as a type of high printing, was reborn in printmaking. Letterpress proof presses and machines, which are used to obtain testing and approval during the pre-press process, have been accepted by printmaking artists due to many factors such as their easy use, ability to print in small quantities, the ability to use materials other than printing materials as plates, and their small footprint. However, by the 1980s, the production of letterpress proof printing machines had already ended. Manufacturers who succumbed to offset printing have terminated their activities. For this reason, it is very difficult to find these machines, the newest of which is almost 50 years old, and to keep them working. It has been observed that the letterpress heritage and equipment could not be preserved during the transition from letterpress printing to offset printing. Letterpress proofing machines are used by some printing houses in Turkey, the use of letterpress proof machines remains quite limited.

Letterpress proof printing machines, which were out of use in Europe and especially in USA, were adopted by artists, designers, and educational institutions. Thus, a new experimental, creative, educational, and artistic usage method was born. Although these methods of use do not yet exist in

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Turkey, new areas for conservation, education and art production will be able to develop with the acquisition of these machines.

METHODOLOGY

The aim of this study, which uses qualitative research methods, is to conduct the printouts of many contemporary artists and studios working in the field of printmaking with letterpress proof printing machines in the world, while making an examination of the technique from past to present, and to introduce this method and its machines, which do not exist in Turkey, and to guide those who are interested. The transformation of letterpress printing in the historical process, the artists, workshops, and institutions that produce and train in the field of printing making with letterpress proof printing machines were examined and exemplified. Literature review examined national and international publications on the subject. Catalogs and visuals within the scope of the research were discussed. In the study, visual content analysis was performed, and purposeful sampling was used. In the conclusion section, an evaluation and recommendation were made.

Production of letterpress printing and equipment ended in the 1980s. For this reason, limited resources were accessed in the literature review regarding letterpress printing and proof printing. There are very few publications specifically about the use of letterpress proof machines in an artistic context. This study also aims to provide resources to the international literature on the subject.

LETTERPRESS TECHNIC

"High print is the oldest and simplest form of printing" (Grabowski & Fick, 2012: 75). Letterpress printing is a high print technique, and its plate is inside out. The way letterpress printing works is that the areas that will print on the plate, are high and the areas that will not print are low. In this way, the higher areas can receive ink and print. Letterpress printing is done by manually arranging letters side by side, bringing together lead lines cast in machines, and using plates prepared by fixing metal or polymer clichés (İpek, 2023: 812-813). Letterpress printing name comes from the English term typography. *"Typography is the term for printing with independent, movable, and reusable bits of metal or wood, each of which has a raised letterform on one face"* (Meggs, 2012: 68).

"Xylography is the technical term for the relief printing from a raised surface that originated in Asia" (Meggs, 2012: 68). Asia's discoveries in printing found their counterpart in Europe in the 15th century with the movable type system and printing machine developed by a German named Johannes Gutenberg in 1450 (İpek, 2023: 812). Thanks to his position as a jeweler, Gutenberg cut the letters from metal, cast them, and developed a printing press usign the movable type system. Gutenberg was the first to create his letter parts from an alloy of lead, tin, antimony, copper, and bismuth, the same components are still used today (Britannica, 2016). This printing letters are called cast lead types (Erçin, 1961: 12), (Figure 1). On the other hand, wooden type was used for large font type in the titles and headlines of print media such as posters, advertisements, and newspapers especially for headlines (Figure 2). A plate is used to print images and drawings (Figure 3). While clichés were initially made by engraving and carving on wood and metal, other techniques to produce clichés were developed over time. However, the cliché is a costly solution and is not very suitable for colorful printing (İpek, 2023: 813).

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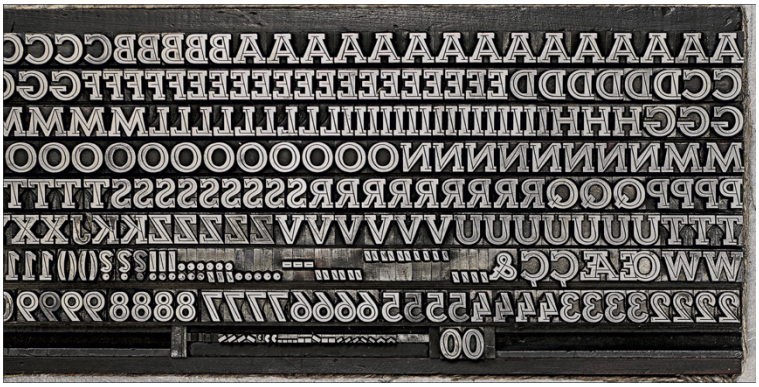

Figure 1. Landi Echo lead type designed by Alessandro Butti in 1939, *International Symposium Torino, Castello del Valentino, September 16-17, 2021, Italy* (nebiolohistory, 2024).

Figure 2. Artz wood type designed by Erik Spiekermann, *The Hamilton Wood Type Legacy Project, USA* (woodtype.org, 2024).

Figure 3. Cliché examples for printing, hot foiling, (left) and embossing (right), Ankara. (Researcher's archive, 2023).

Letterpress is a type of printing that requires a lot of human labor and power (Figure 4). Innovations have been made in type casting and printing over time. The most critical first development for printing was developing a cylindrical printing machine instead of a wooden press that used flat sheet and single-sided printing (İpek, 2023: 815). It is the first printing machine with a cylindrical drum made of cast iron, capable of printing 400 sheets per hour, developed by Friedrich Koenig in 1814 (Koenig Bauer, 2023). The second significant development is the mechanization process of typesetting. It started with the development of the *"Linotype"* machine by Ottmar Mergenthaler in 1886 and the *"Monotype"* machine by Tolbert Lanston in 1893 (Sarıkavak, 2005: 16).

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Figure 4. Composing room of a newspaper, *The Christian Science Monitor,* 1930, USA (Marybakereddylibrary, 2018).

Against to letterpress printing long, laborious and costly way of proof printing presses (Figure 5) and proof printing machines (Figure 6) have been developed as a quality control system to ensure that the pre-press process is correct, to test the job, to prevent errors in advance, to avoid occupying the printing machine and press room, and to obtain customer approval. *"Proof presses, which are important tools of typesetting workshops, have various models, from very primitive to very modern. The proof press, in its most primitive form, essentially consists of a flat plate and a cylinder moving on a slide"* (Çelik & Ünal, 1997: 15).

Figure 5. VANDERCOOK NO. 0 12¾ × 27-inch (32,38 x 68,58cm) letterpress proof press, 1950, USA (Letterpresscommons, 2023).

Figure 6. VANDERCOOK Universal III 18¾" × 28-inch (47,62 x 71,12 cm) letterpress proof machine, 1959, USA (Vandercookpress, 2023).

The proof press, one of the essential tools of the typesetting department, has one or more of them, depending on the strength of the typesetting department. The dimensions of the presses also vary depending on the place of use and the type of service. For a small printing house, a simple hand-pulled proof press is sufficient. A large printhouse or newspaper typesetting department, needs powerful machines that can print page plates precisely and give clear printing when necessary (Evliyagil, 1985: 54).

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The first and simplest proof machines are small sized devices. The operator manually applies ink to the plate fixed to these presses, using a roller, and prints it by passing the roller over the paper placed on it. Proof printing machines were later developed, and their sizes increased. The forming system of normal letterpress printing machines, the grippers that holds the paper and fixes it, the roller system that gives ink to the plate, the ink roller washing system, the adjustable bed system that allows printing with plates at different heights, and the stacking systems for the printed paper have been added. The latest letterpress proof machines produced have B1 format (70 x 100 cm) paper size, in line with the largest letterpress printing machines. The extreme development of proof printing machines has enabled them to be used not only for trial printing in printing houses but also for the reproduction of low-traffic maps, posters, flyers, business cards and similar products.

It is very easy to use and learn both letterpress proof presses and letterpress proof machines. Therefore, in the world, old letterpress proof printing machines, which are idle, are used today by artists in printinmaking, by designers in production, and by schools in typography, graphics, and printmaking education. There is no other way but to print the cast lead type with letterpress and letterpress proof presses. Engraving presses, hand presses or barens crush the cast lead type and render it unusable.

Proof presses that operate on a table or bench consist of a small rubber printing roller that can move back and forth on a flatbed (Figure 5). Some presses have adjustable cylinder to accommodate different heights of plates and thicknesses of paper. After the prepared plate is fixed on the bed, the plate is inked manually with roller then paper is placed on the inked plate. Some presses have grippers that immobilize the paper. Afterwards, the printing operator pulls the cylinder waiting on the left side to the right and passes it over the paper. Thus, printing is done. The process can be repeated according to the desired number of prints. At the end of the printing, the ink on the plate is cleaned. The typefaces are distributed in their cases and any clichés are stored if any.

Proof printing machines consist of a metal printing cylinder and ink rollers that can move back and forth on a flatbed (Figure 6). Some machines have an adjustable bed to accommodate different heights of plates and thicknesses of paper. The prepared plate is fixed on the bed. Proof printing machines have an inking system as in production machines. This system thins the ink and delivers it to the ink rollers. For printing, the operator places the paper on the feeding tray and places it in the opened grippers of the printing cyclinder. While the fixed paper wrapped around the cylinder with movement, the ink rollers move forward and transfer ink to the plate. The paper rotates on the plate at the printing cyclinder, printing is realised. The printing section at the end of the bed returns to the beginning and releases the printed paper. Thus, printing is done. The process can be repeated according to the desired number of prints. In some printing machines, the printing section is moved manually by the operator by turning the lever, while some machines are completely electric, and the printing is controlled by pressing the buttons or the foot pedal. At the end of the printing, the ink rollers are cleaned. While some machines can do this themselves, this cleaning can also be done manually. At the end of the printing, the ink on the plate is cleaned. The typefaces are distributed in their cases and the clichés are stored if any.

LETTERPRESS PROOF MACHINES

Proof print is testing printing for approval and testing purposes before mass production. Proofing, a quality control practice, is included in the prepress process in desktop publishing, but can also be performed at the printing stage. It is necessary for the proof print to be highly similar to the product that will be produced at the end of the production process in order to prevent possible errors.

Proofing has been accepted because it not only enables customer approval to be obtained, but also helps to correct and prevent errors that are difficult to correct, costly and impossible to correct at the production stage, which can only be seen during the printing process. It is a verification method for graphic designers that ensures that the same result can be achieved in the production of the design that

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appears on the screen. Proof printing is the way to bring the graphic designer, customer, and printer together in the same line.

Before the full use of computer technologies, prepress preparation was a long and difficult process. In particular, letterpress page layouts were almost entirely entrusted to typesetters and page editors. It was almost impossible to see the final design of work until after printing. For this reason, letterpress proofing equipment began to be used in the printing house in the late 1800s as a test method without occupying the printing machines. The first proof printing machine was developed by Robert Vandercook in 1909. Letterpress proof machines are produced in column format as well as sheet format. Column format machines were used in newspaper printing where there was a race against time.

In the production of letterpress proof machines, the VANDERCOOK brand in the United States and the Swiss F.A.G Form-Test Brand and the German KORREX brand in Europe come to the fore in continental America. There are other manufacturers such as Challange, Reprex, Hohner, Soldan, Grafix (Figure 11) that produce under the license of these companies or produce their own designs. Manufacturers on both continents did not produce letterpress machines for the printhouse. Leading companies such as Koenig Bauer, Albert Frankenthal, MAN Roland, Heidelberg, Nebiolo and Miehle, which produce letterpress printing machines for the printing industry, did not produce letterpress proof machines.

In a publication by Heidelberg in 1969, states that proof printing machines differ from the production machine in terms of plate drum, printing speed, ink setting, water setting, blanket and drum paper, and that due to such structural differences, the prints of the proof printing machine and the production machine cannot be the same (Heidelberg, 1969: 20-21). This approach of Heidelberg answers why production machine manufacturers do not also produce proofing machines (İpek, 2024: 956). The Original Heidelberger Tiegel, which was the most common platen press machine in this period, is the most produced printing machine in the world with 165,100 units from 1926 to 1985 (Glocker, 2007: 186-189). Although Heidelberg's statement is for offset proofing, it can be understood that there is also market concern. Large manufacturers did not want small proof machines to replace their own machines.

It has been determined that letterpress proof presses and machines are used in a small number of printhouses throughout Turkey, and that there is no situation regarding the re-evaluation of letterpress proof presses and machines in Turkey.

As offset printing replaced letterpress printing in commercial printing, all manufacturers had to end their production of letterpress proof machines in the 70s. While some manufacturers have completely withdrawn from the market, some have started producing offset proof printing machines. As of the 90s, with the development of computer technologies, proof print began to be taken from digital printing machines and offset proof print machine production ended in the early 2000s.

Vandercook

While in the early twentieth century, printers were making simple proofs with rollers and cylinders on galleys for printing, in 1909 Robert Vandercook was the first person, developed a proof press with gears, hard beds and cylinders that could provide the printing industry with high-quality proofs from type and photogravure plates. The Vandercook and Sons brand has set the standard in proof printing machine production in the USA and Europe (Figure 5-6). In the 1960s, as offset printing eclipsed letterpress printing as the leading commercial printing method, presses began retiring their letterpress equipment, often giving it away. As a result, Vandercook presses have been adopted by artists and amateurs for limited-run, low-run prints due to their ease of use. Vandercook machines, which are now widely available in art schools and printing arts centers, have mostly become the preferred printing machine for quality printers and artists (Figure 7) (Vandercook, 2023). From 1909, when the first machine was produced, until 1976, when the last letterpress proof machine was produced, Vandercook was the only

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company with paper sizes ranging from the smallest to 14 ¾ × 20 inches (37,46 x 50,8 cm) and the largest to 24 ¾ × 27 inches (62,86 x 68,58 cm). It has produced color, two-color and four-color letterpress proof machines. The company also produced printing equipment, gravure press, and offset proof print machines. Vandercook, which changed hands several times over time, was purchased by Tom Bell and Hal Sterne from NA Graphics in 1994 and moved to Ohio. In 1996, Fritz Klinke purchased NA Graphics and moved it to Colorado. Today, NA Graphics continues to provide technical support and spare parts for Vandercook machines.

Figure 7. Chris Chandler at work on the Vandercook proof machine, USA (Neuhauspress, 2021).

F.A.G

Joseph-Otto Bobst, brother of Bobst S.A. founder Hanry Bobst, founded the quality control systems F.A.G (Fournitures pour les Arts Graphiques) in Lausanne, Switzerland, in 1937 to introduce the American-style proof printing method. It started to produce its first machines in Germany and France in 1946. 1960, production was consolidated under one roof in the city of Avenches. The company developed F.A.G Control and F.A.G Swissproof, which are exported to five continents (Figure 8). F.A.G letterpress proof machines are renowned for their Swiss precision, reliability, and trouble-free operation. The production of letterpress proof machines was switched from the production of letterpress proof machines to the production of offset proof machines in 1972, causing known changes in the printing industries and changing the technical needs for proof printing. Approximately 2000 letterpress proof presses were produced in Avenches between 1962 and 1991. Today, F.A.G company works on printing quality control systems in the city of Lausanne and overhauls F.A.G machines and provides service and parts supply. F.A.G produced letterpress proof machines with paper sizes of 40 x 58 cm, 52.5x 72 cm, 81.5 x 54.1cm, 83.5 x 68 cm, 83.9 x 68 cm and 89.5 x 68 cm (Proofpress, 2023).

Figure 8. FAG Swiss Proof S 52 (Hacking gutenberg, 2024).

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Korrex

KORREX proof machines (Figure 9), produced by Max Simmel Maschinenfabrik in Pforzheim, Germany, between 1918 and 1977, have a press cylinder moving on a flat bed. In the 1960s these machines were imported to the USA by Bauer Presses Inc in New York. It produced a letterpress proof machine with paper sizes of 35×44 cm, 38×50 cm, 42×58 cm, 53×70 cm, 72×102 cm, 86×113 cm (Vandercook, 2023). During the period when offset printing started to replace letterpress printing, Korrex concentrated on the production of offset proof printing machines and merged with F.A.G to produce F.A.G-KORREX offset proof printing machines. After withdrawing from the printing industry, Max Simmel Maschinenfabrik company continues to supply parts for old proof machines while producing in another field, but its commercial activities have ended today.

Figure 9. Korrex Frankfurt letterpress proof machines in 61x86cm.
Source: (Korrex Catalogue).

REUSE AND CONSERVATION

The history of printing is replete with examples of artistic adaptations of technologies originally developed for commercial or other purposes (Grabowski & Fick, 2012: 35). The concept of artistic printing is expressed in English with the term *"printmaking". "It is a print that is designed and produced by the artist"* (Merriam-webster, 2023). Among many printing types such as commercial printing, personalized printing, digital printing, the naming of printmaking better describes the technique. Unlike commercial printing, artistic printing is the process of transferring designs prepared manually or with computer support to paper and its derivative printing materials, whose raw materials are mainly cellulose and cotton, through hand-made or ready-made wooden, plastic, metal and stone plates and reproducing them in limited quantities. In the artistic printing method, gravure presses, lithography presses, screen printing machines, letterpress and offset proof machines, hand presses and hand tools are used (İpek, 2023: 21). While the intaglio press is the most common and convenient tool used for printing relief elements, many artists still use vertical iron hand presses such as the Albion, Columbia, or Washington for the high-pressure process. These plate presses are antiques used in high-pressure printing and printing, before the development of lithography and digital methods to produce large numbers of prints. Letterpress proof presses are a favorite of many artists. The proof press is an excellent choice when printing large prints or combining images with letterpress printing (Grabowski & Fick, 2012: 35). Letterpress proof presses can print with lead type, wood type, and clichés, as well as with linoleum and wooden plates. While some artists stick to old production techniques and print using old type and wooden letters (Figure 13, 14, 17, 20, 21), some artists experimentally use current technologies such as laser and CNC cutting machines in plate production and blend the old and the new (Figure 7 and 10).

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Figure 10. Dafi Kühne at work on the Grafix letterpress proof machines at Zurich (Kühne, 2021).

Letterpress machines, letterpress proof machines and letterpress printing equipment, which have been abandoned in commercial printing, and those who have not been scrapped, have found a place in a group that is passionate and curious about high printing. Thus, the legacy of letterpress printing equipment and typefaces that could not be transferred to digital form has been protected. Those who own these machines and equipment can be listed as follows; Printing houses that continue to do business with letterpress printing, new printing houses, artistic printing workshops, artists, museums, and schools.

There are 356 museums affiliated with the Ministry of Culture and Tourism of the Republic of Türkiye (Müze, 2023) and 365 private museums under the supervision of the ministry (Kvmgm, 2023). These museums are related to paper, press and graphic arts, there is no pure printing museum. Existing museums also host some old printing equipment and products, they do not offer printing experiences. Although there are a few letterpress printing workshops with an artistic approach, these enterprises appear to make commercial printing and they print on letterpress machines, not on proofing machines. The only letterpress proof printing machine in active operation in Turkiye is the Grafix brand machine owned by Assoc. Prof. Alper Raif İpek (Figure 11).

Figure 11. Grafix 0 (39 x 53 cm) letterpress proof machine, Ankara (Researcher's archive, 2016).

Hatch Show Print

Hatch Show Print, founded by the Hatch family in 1875, is one of the oldest letterpress printing houses in the United States, now located in Nashville (Figure 12). The printing house, which hand-prepares and prints flyers, posters and billboards for circus shows, minstrel shows, vaudeville shows and carnivals as representatives of Southern culture and entertainment, specializes in music show posters (Figure 13). In its heyday between 1920 and 1950, the print house printed the most unforgettable images of country music artists with large-sized wooden blocks carved and inlaid by William Hatch. The printing house went through a period of stagnation in the 70s and 80s and changed hands several times. In 1992, Hatch Show Print was inducted into the Country Music Hall of Fame and Museum. Today, it is owned and

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managed by the Country Music Foundation. The printing house, which produces 500-700 printed works per year, accepts 100,000 visitors and organizes internship programs for amateurs and professionals with the *'preservation by education'* method. Many letterpress proofing and printing machines are used in the print house, which has a large accumulation of wooden plates, types, and materials (Hatch Show Print, 2023). Hatch Show Print continues to take print orders and is open to artists who want to make prints.

Figure 12. Detail from Hatch Show Print, Nashville (Hatch Show Print, 2024).

Figure 13. "Pickin' and Printin Poster" printed by Hatch Show Print, Nashville (Hatch Show Print, 2017).

Hacking Gutenberg

Erik Spiekermann, founder of MetaDesign and FontShop, former chairman of Edenspiekermann, new supervisory board member, multi-award-winning art historian, printer, type designer, information architect and writer, has been running P98a, an experimental letterpress printing workshop, since 2014 (Spiekermann, 2023). However, at the end of 2023, Spikermann renamed the workshop as Hacking Gutenberg, referring to the digital pre-press and analog production process he carried out. Hacking Gutenberg is an experimental letterpress workshop in Berlin dedicated to letters, printing, and paper, exploring how letterpress can be redefined through research, printing, collecting, publishing, and production in the 21st century. Workshops for individuals and groups are held regularly at Hacking Gutenberg (Figure 14). He works with cast metal and wood fonts; proofing and letterpress presses and other traditional analogue equipment and combines them with digital technologies. The workshop has

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more than 500 poster types and 450 cases of type between 6 and 96 points, 5 proof print machines, 1 letterpress print machine with Heidelberg Windmill and Cylinder (50 x 70 cm), 1 letterpress printing machine with Johannisberger Cylinder (96 x 130 cm) has a letterpress printing machine, Ludlow caster, Riso printing machine and letterpress equipment (P98a, 2023). Spiekermann states in Hacking Gutenberg that the equipment does not exist solely for protection purposes but exists entirely for use. In addition to the production of typographic posters of his own design (Figure 15), the workshop is available for rent by other artists. On P98a site, Spiekermann's 35x50 cm posters are available for €29.80 and 50x70 cm posters for €98.00, while other printed materials can also be found.

Figure 14. Erik Spiekermann (rightest) at work in a workshop on letterpress proof presses at P98a, Berlin (Hacking Gutenberg, 2024).

Figure 15. "Better Done Than Prfect Poster" designed and printed by Erik Spiekermann at P.98a, Berlin (P98a, 2024).

Tipoteca Italiana

Tipoteca Museum is a working museum and is in Treviso, Italy (Figure 16). It is owned by the Tipoteca Italiana Foundation (TIF), a private, non-profit organization founded in 1995 and supported by the Antiga brothers, owners of Antiga Grafiche Print House, Italy's leader in high-quality offset printing. The Foundation aims to give importance to the Italian type and printing heritage. Tipoteca showcases the work of type designers and printers responsible for the aesthetics of books, magazines, and ephemera from a period full of artistic movements and social movements. The museum, archive, library, printing

house and auditorium are open and dynamic workplaces where students, designers, and enthusiasts from all over the world can discover the history and heroes of type design (Figure 17). The museum houses 1,600 typefaces and 1,828 wooden fonts, dozens of printing machines, printing presses and letterpress equipment, and has archives of former Italian type foundries. Tipoteca organizes workshops and courses on typesetting, printing, handwriting, and binding for participants of all ages. Educational activities are aimed at understanding printing, an invention that enabled the universal dissemination of knowledge and the birth of the modern book. The tools used during the workshops were iron hand presses, cast, and wooden typefaces (Tipoteca, 2023).

Figure 16. Detail from Tipoteca Italiana (Tipoteca, 2022).

Figure 17. Alan Kitching (right) during a workshop at Tipoteca Italiana in 2015, Treviso (Tipoteca, 2024).

UArts (University of the Arts)

UArts (University of the Arts) was formed in 1876 by the merger of two century-old institutions, the Philadelphia College of Arts, and the Philadelphia College of Performing Arts (Figure 18). After gaining university status in 1987, it has become the largest institution of its kind, offering programs in design, fine arts, media arts, crafts, music, dance, theater, and writing. The university, which has associate, undergraduate and graduate programs in many branches, has a 4-year broad painting and print media undergraduate program and a 2 year book arts and printmaking graduate program (Figure 19). (UArts, 2023). Since its establishment, the book arts and printmaking program, headed by Prof. Mary Phelan, has a half-dozen proof presses and many types of cast and woodblock letters. This workshop was established with equipment donated by printers in the city and collected by Phelan herself (Fritton, 2018: 120).

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Figure 18. Students working at the letterpress proof press at Uarts (Uarts, 2024).

Figure 19. Uarts Book Arts & Printmaking Programme student Sara Moose-Torres' work 2020 (Uarts Catalogue, 2024).

Alan Kitching

Alan Kitching is one of the world's leading practicing artists in the fields of letterpress printing, typographic design, and printmaking (Figure 20). *"He is renowned for his expressive use of wood and metal letterforms and his work has been featured by major galleries, magazines, and brands around the world. He is an Honorary Fellow of the Royal College of Art and visiting professor at the University of The Arts London"* (English Heritage, 2023). He has worked for many years with The Guardian, magazines such as Dazed and Confused, institutions such as the National Theatre, British Library, Tate Modern and publishing houses such as Penguin Books. He has opened personal exhibitions in London and Barcelona and participated in many group exhibitions in Europe. Kitching's interest in typography began to materialize during the years when he started working with graphic designer Anthony Froshaug. His education began in the 1980s, when he was invited to the Royal College of Art to give a letterpress printing workshop class one day a week. Kitching, who carried out a series of workshops with technician Mick Perry, said to his students about the traditional letterpress technique, which is now obsolete in an age where technology advances, "What interests me is not letterpress, but what you can do new with it" during this teaching process that lasted until 2006. Kitching, who shows that letterpress printing and computers can co-exist in every aspect, from production to education, says of his students, *"If they had not wanted to learn and continue letterpress printing, this traditional technique would have died long ago"* (GMK, 2016). On Kitching's site, posters sell for between £300.00 and £500.00 (Figure 21).

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Figure 20. Alan Kitching at work on the letterpress proof machine at his studio, London (Alankitching, 2024).

Figure 21. "Baroque Poster" printed by Alan Kitching at his studio (Alankitching, 2024).

CONCLUSION

The production of letterpress printing and equipment ended in the early 1980s. High printing ceased to be a method in commercial printing and was completely replaced by offset printing. While the remaining letterpress printing machines, especially the large-sized ones, have acquired new tasks in printing such as hot-foiling, cutting, creasing, and numbering, small-sized machines have not been so lucky. Some of these printing machines continue to work this way today. The biggest legacy of letterpress printing, the lead type, has been scrapped. The letterpress proof presses used in the pre-printing process were rescued by a group of enthusiasts and lovers of high printing. Thus, with art and education, letterpress proof machines started to experience their second change in printmaking. The use of letterpress proof presses in printmaking has also helped to rescue the heritage of the letterpress. The users continue to use old lead and wood type with these machines. In fact, years after the end of type design and casting, the famous German typeface designer Erik Spiekermann designed the Artz typeface for use in his prints and it was produced by Hamilton Wood Type in the USA. Spiekermann actively uses the Artz font in his printmaking posters, which he prints on a letterpress proof machine. Dafi Kühne and Chris Chandler, on the other hand, prepare the plates of their computer-generated designs on laser cutting and CNC cutting machines and print them on letterpress proof machines. These approaches successfully exemplify the use of letterpress proof presses in printmaking in terms of contemporary art production. Letterpress proof presses in printmaking offer the reusability of lead type and plate, intervention to the plate at the time of printing, the use of wood and linoleum plates such as metal and polymer clichés, wide colour universe of printing ink, over printing, embossing and debossing on paper, the ability to print on similar materials as well as paper, *"reduction"* and *"artist's print"* applications and working as a single operator. They are almost like a "kindergarten" with their easy learning and very simple working techniques, along with the convenience, experimentation, creativity, and education they offer. For this reason, letterpress proof presses continue to be in demand by artists and educational institutions even

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after 50 years of their production. The fact that printing with letterpress proof machines allows experimentation and encourages learning through play enables it to be used as an educational material. It provides an experimental learning process for color, composition, typography, and similar elements in graphic design education. For this reason, letterpress proof printing machines are used in many universities around the world for educational purposes. Although they are not available in Turkey, obtaining these machines may be beneficial for education. The use of letterpress proof machines in printmaking ensures the preservation and survival of the letterpress technique and its heritage, through art and education. Many schools, workshops, and museums act in this direction. However, it is almost impossible to preserve and keep alive a huge 500-year heritage and to do this only with individual printmaking income. Erik Spiekermann's call for help in 2022 because he could not run the P98a workshop on his own, renaming it Hacking Gutenberg and starting a subscription in 2023, the fact that Hatch Show Print can be operated by a well-established foundation, and the fact that there is a large printing foundation behind the Tipoteca Museum confirms the situation. The situation will not be different for the workshops and living museums that can be established in Turkey. Similar unions of forces and support are necessary for the use of high printing machines in printmaking. Another point is that the graphic design, visual communication, and painting departments as well as the traditional handicrafts departments in the faculties of fine arts should embrace high printing. In a period when printing is thought to be over and offset printing machine manufacturers are increasingly producing digital printing machines, it is a fact that high printing will have a hard time surviving. There seems to be no other way for the survival of letterpress printing, for which the production of the machine and its type has already ended, other than the use of art and education. For this reason, letterpress proof machines offer a good alternative for the continuation of the high-press technique.

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