



History Of Ink With Special Reference To Punjab Region

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Abstract: Ink, a seemingly simple substance, has played a pivotal role in human history, facilitating communication and preserving knowledge across generations. Various ink styles have evolved through historical and cultural influences and in the art of writing and painting. Over time, ink evolved to accommodate advancements in communications and culture, particularly in religion such as Punjab. Punjab, with its rich cultural, historical and artistic heritage, has contributed significantly to the development of ink as a medium for writing, painting and religious practices. The significance of ink in manuscripts, paintings, and scriptures, especially within the sikh tradition. This paper is mainly focused on exploring the evolution of ink, tracing its origins to ancient civilizations and examining its significance in the context of Punjab, a region renowned for its rich literary and artistic heritage.

Keywords: Ink, Manuscripts, Punjab, calligraphy, Heritage, Writing and Paintings

Introduction

Ink is a liquid or paste used for writing, printing or drawing. Its primary components are pigments or dyes, solvents, and binders. The pigments or dye provide colour while the solvent ensures the ink is liquid and the binder helps the pigment adhere to surfaces like paper. The development of ink has been an evolutionary process, the trail from the earliest cave paintings to the digital age; humans have sought ways to record and transmit information. Ink, a medium for writing and drawing, has been an indispensable tool in this endeavour. This paper delves into the history of ink, examining its diverse forms and cultural significance, with a particular focus on its role in the historical and cultural landscape of Punjab (Forty Centuries of Ink, 2025).

Review of Literature

A comprehensive review of literature on the history of ink reveals a wealth of information from various disciplines, including archaeology, chemistry, history, and art history. Studies on ancient writing materials, such as those by (Johnson, 1973), provide insights into the earliest forms of ink and their evolution. Research on the history of writing in South Asia, as exemplified by (Needham, 1959), sheds light on the specific context of ink usage in the region. From the Punjab region, manuscripts /other documents written in Punjab, Persian, Urdu, Sanskrit, and Hindi, which are related to cultural and historical texts. Additionally, studies on the art and culture of Punjab, such as those by (Chopra, 1995), offer valuable perspectives on the role of ink in the region's artistic and literary traditions.

Study of the Objective

The objective of this paper is to write about history and its uses of Ink that scope revolves around the Punjab region.

History of Ink

The origins of ink can be traced back to ancient civilizations, where natural substances like soot, charcoal, and plant extracts were used to create pigments for writing and drawing. Early inks were often simple mixtures of pigments and binding agents, such as gum or wax. Over time, more sophisticated formulations emerged, incorporating metallic salts and other chemical compounds to achieve specific colours and properties. The history of ink spans millennia, evolving from early natural dyes to the sophisticated formulations used today. Here's a brief overview:

1. Ancient Origins

Ink usage dates back to ancient civilizations like Egypt and China, where carbon-based inks were developed using soot, charcoal or lampblack mixed with binders like gum or glue. Egyptians used black ink made from soot and gum Arabic, ideal for inscribing on papyrus.

2. Chinese and Indian Ink

Chinese ink, also known as India ink, utilized a mixture of soot, glue, and pigments. It became widely used for calligraphy and painting in East Asia and spread along trade routes to India and beyond. It was also known for durability.

3. Classical Era

Romans utilized a variety of inks including carbon-based inks and inks made from iron salts and tannins. Greek inks were often derived from plant extracts and were used for writing on papyrus and parchment.

4. Middle Ages

In Europe, ink production was largely centred on iron gall ink, made from tannin extracted from oak galls mixed with ferrous sulphate. This ink was highly durable but could be corrosive to parchment over time. Ink made from plant extracts like walnut hulls, berries and indigo continued to be used.

5. Modern Era

In the 19th century, the Industrial Revolution brought about synthetic inks, replacing traditional formulations with chemically engineered compounds that offered more consistent quality and color options. In this period, the discovery of aniline dyes led to the creation of vibrant and more stable inks and the development of fountain pens spurred the creation of new ink formulations that flowed smoothly.

6. 20th Century

Ink development surged with advancements in printing technology, leading to the creation of specialized inks for various purposes, including ballpoint pen inks, toner inks for photocopiers and laser printers, and more recently, inkjet printer inks and digital printing also. Today we have a wide range of specialized inks including conductive inks for electronics, invisible inks for security applications, and bio-degradable inks for environmental sustainability.

7. Contemporary Formulations

Today, inks are highly specialized and include water-based, oil-based, and solvent-based types, each tailored for specific applications ranging from art to industry.

Throughout its history, ink has not only been a medium for communication but also a reflection of cultural and technological advancements, adapting to meet the needs of writing, printing, and artistic expression (A History of Ink, 2023)

Types of Ink in India

In Indian manuscripts, various forms of ink styles have been historically used depending on the region and period. Some notable types include:

1. **India Ink (Masit):** This traditional ink, also known as masit, was commonly used in ancient India and is made from lampblack or soot mixed with various binders such as water, gum Arabic, or shellac.

2. **Charcoal Ink:** Made from charcoal mixed with a binder, this type of ink was used particularly in Buddhist manuscripts and inscriptions.

3. **Red Ink:** Used for emphasis or to highlight important passages, red ink was often made from natural sources like red ochre or cinnabar.

4. **Iron Gall Ink:** Introduced later through trade, this ink became popular in medieval times and was made from tannin (extracted from oak galls) and iron salts.

5. **Plant-based Inks:** Inks made from plant sources such as indigo, turmeric, or various berries were also used in some regions for manuscript writing.

Each region and period in India had its preferred ink formulations, influenced by local materials and cultural practices. These inks were used across various languages including Sanskrit, Prakrit, Tamil, and others, reflecting the rich diversity of Indian manuscript traditions (Basri et al., 2021).

History of Ink in Punjab Region

Punjab, a region with a rich literary and artistic heritage, has a long history of ink usage. The region's vibrant cultural landscape, characterized by a flourishing tradition of manuscript production, miniature painting, and calligraphy, necessitated the availability of high-quality inks. The development of indigenous ink-making techniques in Punjab reflects the region's unique artistic and cultural needs. In the Punjab region, historically, several types of ink were used in manuscript writing, reflecting both local traditions and influences from neighbouring regions. Here's a general overview of the types of ink used in the region from ancient times to the present:

Ancient Inks

1. **Carbon-based Ink (Soot Ink):** This ink, made by mixing soot or lampblack with water and a binder like gum arabic, was commonly used in ancient Punjab. The ink was created by collecting soot from burning oils or resins, which was then mixed with water to create a liquid ink. This type of ink was often used for writing on parchment or palm leaves.

2. **Iron Gall Ink:** A more sophisticated ink used during the medieval period, this ink was made by combining tannin (extracted from oak galls) with iron salts. It was widely used in Persian, Arabic, and Mughal script writing. Iron gall ink was dark and durable, making it ideal for manuscripts.

3. **Vegetable-based Inks:** In ancient Punjab, inks were sometimes made from plant extracts and vegetable dyes. These natural dyes could produce a variety of colors, from deep reds and purples to greens and browns (Rabin, 2021).

Mughal and Sikh Era Inks

1. **Gold and Silver Inks:** During the Mughal and early Sikh periods, illuminated manuscripts often used precious metals like gold and silver. These inks were mixed with metal powders to create bright, reflective writing, particularly in religious texts and artwork.

2. **Saffron or Turmeric-based Ink/Red Ink:** These were used to create yellowish ink for religious or decorative purposes. They were mainly used for calligraphy in religious manuscripts. Red ink made from sources like red ochre or vermilion, it was often used for headings, annotations, or emphasizing important text.

Colonial and Modern Inks

1. **Iron Gall Ink (Colonial Period):** Continued use of iron gall ink in colonial Punjab, as it was a stable and dark ink. It was used widely for official documents, letters, and other written correspondence under British rule. This ink, derived from oak galls and iron salts, became popular in later periods due to its durability and darker colour.

2. **Synthetic Inks (Modern Era):** With industrial advancements, synthetic inks began to replace traditional methods in the late 19th and 20th centuries. These inks are based on dyes and pigments that are mixed with water, alcohol, or oils.

3. **Ballpoint Pen Ink:** The most common ink used in modern times, composed of dyes or pigments suspended in a liquid solvent (water-based or oil-based).

4. **Fountain Pen Ink:** This ink, typically water-based, is used for fountain pens and is available in various colors.

5. **Printing Inks:** Modern printing technologies have led to the development of specific inks used in offset, screen, and digital printing. These are generally chemical-based, using pigments or dyes mixed with solvents for fast drying and color accuracy (Rabin, 2021)

Current Types of Ink

1. **Gel Ink:** A variation of ballpoint ink, gel ink is thicker and provides smoother writing with vibrant colors.

2. **Marker Inks:** Used for markers, these inks are available in various colors and are used for both artistic and practical purposes (such as whiteboard markers, permanent markers, etc.).

In conclusion, from the soot-based inks of ancient Punjab to the synthetic inks of today, the use and formulation of ink have evolved in both complexity and variety. Modern inks are highly refined and serve a wide array of purposes, including personal, artistic, and industrial uses.

Materials and Techniques

1. Manuscripts in Punjab were often written on materials such as handmade paper or parchment (especially in earlier times).

2. Scribes and scholars used reed pens (qalam) or brushes (kalam) to write with ink, which required skill and precision.

Languages and Scripts

Punjabi manuscripts were written in various scripts depending on the period and religious or cultural context. Here's a brief overview of the popular scripts in the region:

1. **Punjabi:** Manuscripts in Punjabi often include Sikh religious texts, historical accounts, and poetry.

The Guru Granth Sahib, a key Sikh scripture, is written in Gurmukhi script, which is a significant part of Punjab's manuscript heritage. Gurmukhi script, used for writing Punjabi, became prominent especially for Sikh scriptures (Guru Granth Sahib, Pothis) and other religious texts.

2. **Shahmukhi:** Scripts like Shahmukhi (Perso-Arabic script used for Punjabi in Pakistan) are also used in manuscripts depending on the linguistic and regional context.

3. **Persian:** During the Mughal period, Persian was a prominent language in the Punjab region. It can be found in historical records, court documents, and poetry in Persian. Important texts from this period include works by poets like MirzaGhalib and historical accounts of the Mughal Empire.

4. **Sanskrit:** Though less common in modern times, there are ancient manuscripts in Sanskrit related to the Punjab region, particularly those concerning Hindu religious texts and philosophical treatises.

5. **Urdu:** Urdu, with its roots in the Punjab region, has a rich collection of poetry, prose, and scholarly works. Key figures include poets like Faiz Ahmed Faiz and writers who contributed significantly to Urdu literature.

6. **Hindi:** Manuscripts in Hindi from the Punjab region may include classical literature, religious texts, and historical chronicles. The development of Hindi literature has been influenced by various regional and historical factors.

These manuscripts are often preserved in various libraries and archives, such as the Punjab State Archives, the National Archives of India, the Universities & colleges, and private collections. They offer valuable insights into the region's history, culture, and literary traditions.

Cultural Influences

Manuscript production in Punjab was influenced by both local traditions and interactions with neighbouring regions, such as Central Asia and Persia, leading to the adoption of certain styles of ink and calligraphic practices. Overall, the use of ink in Punjab's manuscript tradition reflects a rich blend of local practices and broader cultural exchanges over centuries.

Conclusion

Ink, a seemingly simple substance, has played a profound role in shaping human civilization. Its history is intertwined with the evolution of writing, communication, and artistic expression. In Punjab, ink has been an integral part of the region's rich cultural heritage, contributing to the creation of a vast corpus of literary and artistic works. As we move into an increasingly digital age, it is important to recognize the enduring significance of ink and its role in preserving our cultural and intellectual legacy. Ink has evolved significantly over time, from simple natural mixtures to complex chemical formulations. Advancements in chemistry and technology have played a crucial role in shaping the history of ink. Ink continues to be an essential tool for communication, art, and technology in the modern world. This is a brief overview. The history of ink is a rich and fascinating subject with many intricate details and regional variations.

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