A/V Production: Introduction to Communication & the History of Mass Media– From Prehistory to the Printing Press

Introduction

The story of *human communication* is an epic journey spanning millions of years, reflecting our species' creativity, resilience, and unquenchable desire to connect. From the first crude tools to the revolutionary printing press, each advancement in communication has been shaped by the way societies organize themselves to meet their basic needs. This evolution mirrors the changing ways humans have worked together, made decisions, and understood their world. Crucially, it also reflects how we've overcome the barriers of time and distance to share information and ideas, effectively "shrinking" the world with each new innovation.

Communication can be defined as **the sum of all things one person does to create understanding in the mind of another**. *It's a bridge of meaning, involving a systematic process of telling, listening, understanding, and responding*.

The word "communication" itself is derived from the Latin word "communicare," which means to impart, participate, or transmit, and is rooted in "communis," meaning to make common or to share.

The process of communication generally happens in six steps:

1. **An idea arises in the mind of the sender.**
2. **The sender encodes the idea in the form of a message.**
3. **The sender chooses a medium/channel to convey the message.**
4. **The receiver receives the message.**
5. **The receiver decodes, absorbs, understands, and interprets the message.**
6. **The receiver sends feedback or a response.**

As we explore this history, we'll see how the characteristics of modern mass media - such as large, heterogeneous audiences and sophisticated, complex messages - have their roots in the earliest forms of human communication.

Mindfulness Moment: The definition of communication emphasizes understanding. As you read, think of a time when a message you conveyed was misunderstood. What can you learn from this experience that applies to the communication steps outlined in the text?

The Dawn of Communication: Paleolithic Era

Imagine a group of early humans huddled around a flickering fire, their shadows dancing on the walls of a cave. An elder gestures animatedly, recounting a successful hunt. The listeners lean in, absorbing not just the excitement of the story, but crucial information about survival techniques.

Paleolithic period: The earliest period of human history, beginning at least 3.3 million years ago.

Our journey begins in the *Paleolithic* period, a time when our earliest ancestors were developing the foundations of human society. This vast span of time saw the first tentative steps towards shrinking the world through communication, although the process was incredibly slow by modern standards.

Tools: Any object modified or used by humans to achieve a specific goal or purpose.

The oldest tools we've found, dating back 3.3 million years, are sharp stone flakes used as knives and larger unshaped stones used as hammers and anvils, discovered at *Lake Turkana* in *Kenya*, on the *African continent*. This site, located in the heart of the Great Rift Valley, marks the beginning of our journey through the evolution of human communication. These simple tools represent the beginning of humans' ability to shape their environment to meet their needs. While these tools didn't directly aid communication, they mark the start of human technology and problem-solving, setting the stage for future innovations.

Homo erectus: An early human species that lived from about 2 million to 100,000 years ago.

A major leap forward came when our ancestor Homo erectus began using fire in caves around 1.5 million years ago (with some evidence suggesting it might have been as early as 1.8 million years ago). Evidence of this has been found across *Africa*, *Asia*, and *Europe*, showing how our ancestors spread across vast distances, carrying their innovations with them. Fire provided warmth, protection, and a way to cook food, but it also created a central gathering place for early humans. These gatherings likely fostered the development of language and the sharing of knowledge, essential for the group's survival. This represents one of the first significant contractions of space in human communication, as fire allowed larger groups to communicate more effectively in a single location.

The Birth of Visual Communication

As humans spread across the world, they began to leave more lasting records of their experiences, marking a significant shift in how information could be preserved and shared across both time and space.

Cave paintings: Prehistoric artwork on cave walls or ceilings.

The oldest known cave painting, found in *South Sulawesi, Indonesia*, on the *Asian continent*, dates back about 45,500 years and depicts a hunting scene. This location, over 6200 miles from *Lake Turkana* to the east, demonstrates how far humans had traveled, bringing their communication methods with them. These paintings weren't mere decorations; they were a way of sharing information about animals and hunting techniques, reflecting the primary concerns of these early societies. Interestingly, scientists used small traces of uranium isotopes in the crust accumulated on top of the paintings to determine their age, showcasing how modern technology helps us understand our ancient past.

The Science of History: Uranium Isotope Dating

Uranium isotope dating is a method scientists use to determine the age of very old objects, like rocks or ancient artifacts. Here's how it works:

1. *Uranium is a radioactive element found in many rocks and minerals. Radioactive means that its atoms are unstable and will spontaneously decay over time, releasing energy*

and transforming into other elements.

2. *Over time, uranium atoms decay, or break down, into other elements at a constant rate. This rate is known as the "half-life."*
3. *There are different isotopes of uranium, but the most commonly used for dating is uranium-238. It has a half-life of about 4.5 billion years.*
4. *As uranium decays, it produces "daughter" elements, like lead.*
5. *Scientists measure the ratio of uranium to its daughter elements in a sample.*
6. *Using this ratio and knowing the half-life of uranium, they can calculate how long the decay process has been happening, which tells them the age of the sample.*

This method is particularly useful for dating very old materials, from hundreds of thousands to billions of years old. It's been crucial in helping us understand Earth's history and the timeline of human civilization.

The precision of this method depends on various factors, including the equipment used and the amount of uranium in the sample. Scientists often use multiple dating methods to cross-check their results and ensure accuracy.

Mindfulness Moment: The cave paintings of the Paleolithic Era served as a means of sharing essential information. If you were to create a modern equivalent to communicate an important message today, what would you choose to depict, and what meaning does that hold for you?

Aurignacian lunar calendar: One of the oldest known attempts to track the phases of the moon, carved on a bone tablet.

Between 40,000 and 35,000 years ago, humans in *Europe* started using symbols to represent natural phenomena. The Aurignacian lunar calendar, found in Dordogne, *France*, shows early attempts to track the moon's phases. This site, about 3400 miles northwest of

South Sulawesi, represents another leap in the complexity of human communication. This development reflects a growing need to understand and predict natural cycles, crucial for early agricultural societies. More importantly, it represents one of the first attempts to capture and communicate abstract concepts, allowing information about time itself to be shared across generations.

These early forms of visual communication mark a revolutionary contraction of both time and space. While verbal communication was limited to immediate groups and lifetimes, cave paintings and symbols allowed information to be preserved and shared across generations and potentially with other groups who might encounter these sites. This represents one of the first major "*shrinkages*" of both time and space in human communication, foreshadowing the development of mass media's ability to reach large, scattered audiences with complex messages.

The Rise of Civilization and Writing

As human societies grew larger and more complex, with increasing division of labor and the rise of distinct social classes, they needed more sophisticated ways to keep track of resources and preserve knowledge. This need drove further innovations that would dramatically accelerate the contraction of time and space in human communication.

Early Pottery and Agriculture

Pottery: Objects formed from clay and hardened by heat.

An important step in this development was the emergence of pottery. The earliest evidence of ceramic pottery dates back to approximately 29,000-26,000 years ago in the Czech Republic, in central *Europe*. This location, about 7100 miles northeast of Dordogne, France, marks another step in the spread of human innovation across the continent. Initially, these were sculpted figurines rather than practical vessels. It wasn't until about 16,000 years later, with the spread of agriculture, that pottery began to be used for cooking, storing food, and as clay tokens for an accounting system.

This shift to agricultural societies marked another significant contraction of space in human interaction. Settled communities could grow larger than nomadic groups, allowing more people to communicate and collaborate in a single location. The use of pottery for storage and accounting also represents an early form of non-verbal communication, allowing information about resources to be recorded and shared, hinting at the future development of sophisticated and complex messages in mass media.

The Invention of Writing

The development of writing systems marks a revolutionary contraction of both time and space in human communication. While cave paintings and pottery allowed for some preservation of information, writing systems dramatically expanded this capability.

Cuneiform: One of the earliest known systems of writing, using wedge-shaped marks on clay tablets.

Around 3500 BCE, in Mesopotamia, people developed cuneiform, one of the earliest writing systems. This innovation was closely tied to the needs of increasingly complex urban societies and centralized states. Writing is defined as the act of creating a representation of human language in visual or tactile form.

Uruk: An ancient city in Mesopotamia where some of the oldest written records were found.

The ancient Sumerian city of Uruk, located in modern-day Iraq about 150 miles southeast of Baghdad, has provided some of the oldest written records we have. These clay tablets often recorded economic transactions or religious texts, reflecting the intertwined nature of economic and ideological structures in early civilizations. Interestingly, clay tokens were used to track inventory and transactions for nearly 8000 years before the development of cuneiform.

Writing allowed for more precise transmission of complex information across both time and space, effectively shrinking the world by allowing ideas to travel farther and faster than ever before. A message written on a clay tablet could be transported vast distances, carrying complex information far more accurately than oral transmission. Moreover, these written records could preserve information for future generations with a level of fidelity impossible in oral traditions. This development laid the groundwork for mass media's ability to deliver sophisticated and complex messages to large, heterogeneous audiences.

Early Printing

The earliest evidence of printing dates back to around 2300 BCE in *Mesopotamia*. Printing is the process for mass reproducing text and images using a master form or template.

Sumerians used cylinder seals and stamps to certify documents written in clay tablets. These inscriptions were first stamped into soft clay bricks before firing.

This early form of printing, while limited, represents another step in the acceleration of information spread. A single seal could quickly reproduce the same information many times, increasing the speed and scale of communication. This foreshadows the future development of mass media's ability to deliver common messages simultaneously to vast and diversified audiences.

Writing Around the World

The development of writing systems across the globe demonstrates how this revolutionary technology spread and evolved. Scholars have determined that writing independently developed in at least four civilizations:

1. **Mesopotamia** (3500 BCE): Cuneiform is the earliest writing system we know, developed in the region between the Tigris and Euphrates rivers in modern-day Iraq, in Western Asia. This marks the beginning of our journey through the development of writing.

2. **Egypt** (3200 BCE): Old Egyptian hieroglyphics emerged along the Nile River, about 300 years after and roughly 620 miles southwest of Mesopotamian cuneiform. This relatively short distance and time span suggests possible cultural exchange between these two early civilizations.

3. **China** (1250 BCE): Old Chinese writing appeared on oracle bones about 2,250 years after and approximately 4300 miles east of Egyptian hieroglyphics. This vast distance and time gap underscores the independent nature of its development. The oldest examples are oracle bones - turtle shells and ox shoulder blades used for divination.

4. **Mesoamerica** (1000 BCE): The oldest evidence of writing in the *Americas*, found on the Cascajal Block in what is now *Veracruz, Mexico*, dates to between 1100-900 BCE. This emergence occurred about 250 years after and an astounding 8000 miles southeast of the development of Old Chinese, across the Pacific Ocean. This enormous distance highlights the truly independent nature of writing's development in the Americas.

This global spread of writing over a span of about 2,500 years demonstrates how advances in communication can accelerate the spread of ideas and technologies, even across vast distances and oceans. However, the time between these developments is remarkably short compared to the millions of years of human prehistory that came before. This widespread development of

writing systems laid the foundation for future mass media's ability to reach scattered audiences across vast geographical areas.

Early Authors and Their Works

Enheduanna: The world's first known author, a priestess who lived in ancient Sumeria around 2285-2250 BCE.

The first known author was *Enheduanna*, born around 2286 BCE in *Sumeria*, in what is now southern Iraq. She was the priestess of the moon god Nanna and daughter to Sargon, King of Akkad, founder of the *Akkadian Empire*. Her works, preserved for over 4,000 years, were created in Ur, an ancient city located about 90 miles southeast of Uruk. Her temple hymns were copied down in cuneiform on clay tablets. Two of her works, "The Exaltation of Inanna" and "Inanna and Ebih," have survived in numerous manuscripts. Enheduanna died around 2250 BCE.

The preservation of *Enheduanna's* works for over 4,000 years demonstrates the power of writing to contract time, allowing her thoughts and words to reach us across millennia. This marks a stark contrast to the limitations of oral tradition, where information could be lost or changed significantly over just a few generations. This permanency of written works foreshadows one of the key characteristics of future mass media, where messages can be stored and reviewed over long periods.

Mindfulness Moment: The spread of writing systems across civilizations illustrates the importance of shared information. Reflect on how you share information with others today, especially on social media. What meaning do you find in those exchanges, and how do they shape your relationships?

The Spread of Information

The period from the development of writing to the invention of printing saw a dramatic acceleration in the speed of information exchange. While it took thousands of years for writing systems to spread across the globe, the innovations in printing occurred much more rapidly and spread more quickly.

Early Newspapers

Acta Diurna: Daily public notices in ancient Rome, considered a precursor to modern newspapers.

In ancient *Rome*, around 59 BCE, the Acta Diurna emerged as an early form of public information sharing. Rome, located on the Italian peninsula in southern Europe, was about 1300 miles northwest of Ur, demonstrating how ideas and innovations in communication spread across the Mediterranean world. These "Daily Public Records" or "Daily Gazette" were official notices containing an authorized narrative of noteworthy events in Rome. Started by Julius Caesar, they continued until 330 CE. The contents were partly official (court news, decrees) and partly private (notices of births, marriages, and deaths). Although no copies have survived, they're considered an early form of newspaper.

The Acta Diurna represents a significant step in the regular, systematic dissemination of information to a wide audience. This marks another contraction of both time and space - events could be communicated to a large population within a day, a speed of information spread unthinkable in earlier eras. This development foreshadows the future role of mass media in providing surveillance of society, informing the public about issues, events, and developments.

The First Printed Books

Diamond Sutra: The oldest known printed book, created in China in 868 CE.

The oldest known printed book, the *Diamond Sutra*, was found in a cave near Dunhuang, in northwest *China*. Created in 868 CE, this location is about 4600 miles east of *Rome*, showcasing how different forms of communication technology developed independently across vast distances. It was created using woodblock printing, a technique that arose in *China* around 600 CE. The *Diamond Sutra* is notable for being the first known creative work with an explicit public domain dedication, stating it was created "for universal free distribution."

Woodblock printing involves hand carving each page from a block of wood. The first commercially printed books sold in markets appeared in *China* in 762 CE. This innovation allowed for the production of multiple copies of a text much more quickly than hand-copying, representing another leap forward in the speed of information dissemination.

The physical artifacts of this information exchange, like the *Diamond Sutra* found in *China*, demonstrate how ideas could travel vast distances. The Diamond Sutra, a Buddhist text, originated in India but was found printed in *China*, illustrating the extensive networks of cultural and technological exchange that were developing. This spread of cultural and religious ideas through printed texts foreshadows the future role of mass media in cultural transmission.

The Revolution of Movable Type

Movable type: A system of printing that uses movable components to reproduce the elements of a document.

The invention of movable type marked a significant change in how information could be produced and distributed:

- Bi Sheng invented ceramic movable type in *China* between 1039-1048 CE, likely in Yingshan County, Hubei Province, about 930 miles southeast of Dunhuang. He later experimented with wooden type. This technology allowed for the quick assembly of a page of text, and new, more compact type fonts could be reused and stored.
- The first printed advertisement appeared during this time, around 1127 CE.
- Metal movable type was developed in *Korea* around 1234 CE by Choe Yun-ui using cast bronze, probably in Cheongju, about 590 miles northeast of Yingshan County. While the first books printed with this method haven't survived, the oldest extant books are copies of the Buddhist text *Jikji* from 1377 CE.

These innovations dramatically increased the speed and reduced the cost of producing written materials, laying the groundwork for more widespread literacy and the faster dissemination of ideas. The time between innovations was contracting - while there are about 2,000 years between the development of Egyptian *hieroglyphs* and *Chinese Oracle Bones*, only about 400 years separate the invention of woodblock printing in China and its development in Europe. This acceleration in the development and spread of communication technologies foreshadows the rapid evolution of mass media in the modern era.

The Gutenberg Revolution

In a workshop in 15th century Mainz, Johannes Gutenberg examines a page fresh from his revolutionary printing press. The crisp, uniform letters spell out a passage from the Bible. Gutenberg smiles, knowing that this technology will make books more affordable and accessible than ever before. Across Europe, ideas will soon spread with unprecedented speed and reach.

Johannes Gutenberg: The inventor of the printing press in Europe, around 1440.

Our journey through the evolution of mass communication reaches a pivotal point in Mainz, Germany, a city on the Rhine River in central Europe. Here, around 1440 CE, Johannes Gutenberg developed the first metal movable type printing press in Europe. Mainz is located about 4600 miles west of Cheongju, Korea, demonstrating how similar ideas in communication technology emerged and developed independently across vast distances and cultures.

Gutenberg Bible: One of the first major books printed using Gutenberg's press, in 1455.

Gutenberg's first prints in 1450 were pamphlets and poems. In 1455, he printed his famous Bible, with about 180 copies made in the initial batch - a huge number for the time. *The Gutenberg press could produce 4,000 to 5,000 individual types a day, making it much faster than previous methods. In comparison, Korean artisans worked for 2 years to make 60,000 wooden types*.

The *Gutenberg press* represents another quantum leap in the contraction of time and space in human communication. While previous advances had allowed for faster spread of ideas, the printing press exponentially increased the speed and scale at which information could be disseminated. This development set the stage for mass media's ability to reach large, heterogeneous audiences with common messages simultaneously.

Consider that while it might have taken months or years for a hand-copied book to be reproduced and travel from one end of Europe to another, printed books could be produced in large numbers and distributed much more quickly. Ideas could now spread across the continent in a matter of weeks or months rather than years.

This effective shrinking of *Europe* through faster communication had profound effects on society, contributing to the Renaissance, the Reformation, and eventually the Scientific

Revolution. Ideas that might have taken generations to spread could now do so within a single lifetime. The printing press thus became a powerful tool for cultural transmission and correlation, helping to shape public discourse and understanding across vast distances.

The Evolution of Mass Media

As we trace the development of mass media through history, we can see how it has evolved to encompass various forms:

1. **Outdoor**: From ancient Roman graffiti to modern billboards, outdoor media has long been a part of mass communication in public spaces. This form of media has evolved to capture attention in increasingly crowded information landscapes, often serving entertainment and advertising functions.

2. **Print**: From early cave paintings and cuneiform tablets to the Gutenberg press and modern newspapers, print media has been a cornerstone of mass communication. Each advancement in print technology has increased the reach and impact of messages, allowing for more sophisticated and complex content to be shared with larger, more diverse audiences.

3. **Broadcast**: While beyond the scope of our historical journey for now, the development of radio and television in the 20th century further expanded the reach and immediacy of mass communication. These technologies allowed for real-time transmission of information to scattered audiences, revolutionizing the concept of surveillance in mass media.

4. **Digital**: The internet and mobile devices have revolutionized communication in the late 20th and early 21st centuries, allowing for unprecedented speed and interactivity in information sharing. This digital revolution has further compressed time and space, enabling near-instantaneous global communication and blurring the lines between media producers and consumers.

Each of these forms has contributed to the ongoing compression of time and space in human communication, a trend that has defined the evolution of mass media throughout history. As these technologies have developed, they've enhanced our ability to reach large, heterogeneous audiences with sophisticated messages, fulfilling key functions of surveillance, correlation, cultural transmission, and entertainment.

Conclusion: The Continual Compression of Time and Space

From the first stone tools to the Gutenberg press, and now to our modern digital age, the evolution of human communication reflects not just changing social structures, but also the continual compression of time and space in human interaction. Each major innovation in communication technology has allowed information to travel farther and faster, effectively shrinking the world:

- Early humans might spend a lifetime never encountering ideas from beyond their immediate group.
- The development of cave paintings and early symbols allowed information to persist across generations and potentially reach other groups.
- Writing systems enabled complex ideas to travel vast distances and survive intact for millennia.
- The printing press allowed for ideas to spread rapidly across entire continents within a single generation.
- Modern digital technology enables near-instantaneous global communication.

This journey shows us how the ability to share information more widely and efficiently has often gone hand in hand with significant social changes and the faster spread of innovations. As we look at our current digital age, we can see this trend continuing, with information now able to circle the globe almost instantaneously.

Throughout this evolution, we've seen the emergence and refinement of key characteristics that define modern mass media:

1. The ability to reach large, heterogeneous audiences, *from the gathering of tribes around a fire to the global reach of digital platforms.*
2. The development of sophisticated and complex messages, *from early cave paintings to multimedia digital content.*
3. The capacity to communicate with scattered audiences across vast geographical areas, *a feature that has expanded with each technological leap.*
4. The ability to deliver common messages simultaneously to diverse groups, *a capability that has grown exponentially since the invention of the printing press.*
5. The permanency of media, allowing messages to be stored and reviewed over long periods, *from ancient clay tablets to digital archives.*
6. The use of increasingly advanced technology, *from early tools and pigments to complex digital networks.*

Alongside these characteristics, we've observed the evolution of key functions that mass media serves in society:

1. **Surveillance**: From early warning systems and public notices to real-time news updates, mass media has consistently played a role in informing society about important events and developments.
2. **Correlation**: As societies grew more complex, media took on the role of interpreting events and issues, helping individuals understand their place in the larger social context.
3. **Cultural Transmission**: From cave paintings depicting hunting techniques to the global spread of ideas through books and digital media, mass communication has been crucial in passing on cultural knowledge and values.
4. **Entertainment**: While often overlooked, the entertainment function of media has been present throughout history, from storytelling around fires to modern streaming services, providing relaxation and escape from daily stresses.

The story of mass communication is, at its heart, a story of human ingenuity overcoming the barriers of time and space. It's a testament to our species' ability to adapt, innovate, and cooperate on an ever-larger scale. As we face new challenges in our increasingly interconnected world, understanding this history can provide valuable insights into the role of communication in shaping our societies and our relationship with time and distance.

As we continue to develop new communication technologies, we might ask ourselves: How will future innovations further compress time and space? And how will this changing relationship with time and distance reshape our societies and our world? The answers to these questions will undoubtedly write the next chapter in the indomitable spirit of human communication.

Mindfulness Moment: As communication technology evolves, consider how it could further "shrink" time and space in your life. What future innovations do you envision, and how might they change the way you interact with others or find meaning in your connections?