

Morissan:

The History of Human Communication: How Did Humans Build Language and Become World Leaders

Sejarah Komunikasi Umat Manusia: Bagaimana Manusia Membangun Bahasa dan Menjadi Pemimpin Dunia

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Abstract

The study of human communication history is currently very limited and even if there is, it is still limited to the discussion of the history of mass media such as newspapers, radio, and television, which began to appear at the end of the 19th century. There is no communication study that discusses how humans (Homo sapien) first, tens of thousands of years ago, communicated as humans. How did Sapiens create a language that distinguished him from animals? How did prehistoric humans use language to build group communication so that they became effective hunters and gatherers? This article aims to show how the sciences of history and biology have played a major role in building our understanding of the beginnings of human communication as a foundation for understanding communication itself. Research method used is the qualitative approach where it utilizes a review of the relevant academic publication to provide a comprehensive explanation of the raised questions. To conduct the review, an extensive and integrative search of articles published in major organizational academic research was performed. The integrative approach to systematic literature review used in this article differs from meta-analysis in that it does not utilize econometric and statistical procedures for data synthesis and analysis. The results show, based on previous studies, that Sapiens first communicated as humans when they were able to create abstract objects, which are things that simply don't exist in this world. Sapien is a leader over other animals because of this ability. Effective group communication builds on Sapien's pleasure in gossip. Ultimately, the ability to construct fiction and myth allowed Sapien to build organizations, nations, and even empires.

Keywords: communication, language, history, human, Homo sapien

Abstrak

Kajian sejarah komunikasi manusia saat ini sangat terbatas dan walaupun ada, masih terbatas pada pembahasan sejarah media massa seperti surat kabar, radio, dan televisi yang mulai muncul pada akhir abad ke-19. Belum ada kajian komunikasi yang membahas bagaimana manusia (Homo sapien) pertama kali, puluhan ribu tahun yang lalu, berkomunikasi sebagai manusia. Bagaimana Sapiens menciptakan bahasa yang membedakannya dari hewan? Bagaimana manusia prasejarah menggunakan bahasa untuk membangun komunikasi kelompok sehingga mereka menjadi pemburu dan pengumpul yang efektif? Artikel ini bertujuan untuk menunjukkan bagaimana ilmu sejarah dan biologi telah berperan besar dalam membangun pemahaman kita tentang awal mula komunikasi manusia sebagai landasan untuk memahami komunikasi itu sendiri. Metode penelitian

yang digunakan adalah pendekatan kualitatif dengan melakukan kajian terhadap publikasi akademik yang relevan untuk memberikan penjelasan yang komprehensif atas pertanyaan penelitian yang diajukan. Untuk melakukan kajian ini, pencarian artikel yang ekstensif dan integratif yang diterbitkan pada berbagai publikasi ilmiah utama dilakukan. Pendekatan integratif untuk tinjauan literatur sistematis yang digunakan dalam artikel ini berbeda dari meta-analisis karena tidak menggunakan prosedur ekonometri dan statistik untuk sintesis dan analisis data. Hasilnya menunjukkan, berdasarkan studi sebelumnya, bahwa Sapiens pertama kali berkomunikasi sebagai manusia ketika mereka mampu menciptakan objek abstrak, yaitu hal-hal yang tidak ada di dunia ini. Sapien menjadi pemimpin atas hewan lain karena kemampuan ini. Komunikasi kelompok yang efektif dibangun berdasarkan kesenangan Sapien dalam bergosip. Pada akhirnya, kemampuan membangun fiksi dan mitos memungkinkan Sapien membangun organisasi, bangsa, dan bahkan kerajaan.

Kata Kunci: bahasa, Homo sapiens, manusia, komunikasi, sejarah

Introduction

Scientists agree that the ancestors of today's humans are Homo sapiens (abbreviated as 'Sapiens'), which originated 150,000 years ago in East Africa (Harari, 2015). They can make fire and use it for cooking, which makes it easier for them to chew food. For this reason, sapiens have smaller teeth and jaws than their ancestors. There were members of this human species that had very large bodies, but there were also those with dwarf bodies. Some were brave hunters, but there were also gentle characters who lived by gathering plants. There were those who lived permanently on only one island, but there were those who liked to explore the continent. But they all belong to the genus Homo. They are all human. The term "homo" refers to the genus, and "Sapiens" to the species (Harari, 2015).

From about two million years ago to about 100,000 years ago, the Earth was home to a number of different human species living at the same time. Aside from Sapiens, the earth was inhabited by at least six different human species (Harari, 2015):

- 1) African humans moving to western Asia and Europe evolved into Homo neanderthalensis called 'Neanderthals' ('Man from the Neander Valley').
- 2) Those who moved to East Asia evolved into Homo erectus, or "upright humans."
- 3) 'Man from the Solo Valley' or Homo soloensis lived in the Island of Java, which adapted to tropical weather.
- 4) Homo floresiensis, which stands one meter tall and weighs no more than 25 kg, lives on the Indonesian island of Flores.
- 5) Homo denisova once lived in Siberia.
- 6) In Africa itself, several new human species appeared, such as Homo ergaster, 'Man of work,' and Homo rudolfensis, 'Man from Lake Rudolf'.

But since 10,000 years ago, Homo sapiens has become the only human species on planet Earth (Harari, 2015). All other human species perished. We don't have siblings like other animals. For example, lions are brothers to tigers, horses are brothers to donkeys, and polar bears are brothers to grizzly bears. Why did sapiens survive while other types of humans disappeared? What's the secret to its success?

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How can we live in faraway places with so many different natural conditions? Why is Sapiens able to become a world conqueror? This debate continues. The most likely answer to why Homo sapiens managed to conquer the world is mainly because of its unique language and ability to communicate.

Building language

The most common and believed theory holds that an accidental genetic mutation has altered the nerves in Sapiens' brains that allow them to think in an unprecedented way, so that they are able to talk using an entirely new kind of language (Zhang et al., 2002; Gibbons, 2007). What caused this change, from eating only plants to eating meat, from eating only raw food to cooking it? Experts suspect the cause of this change occurred by chance. However, the causative factor is not something that is too important compared to the consequences of the change, namely an increase in the ability to communicate or use language. What makes the new language that Sapiens utilizes so remarkable that it enables our forefathers to dominate the planet and establish themselves as caliphs on earth?

It should be clarified that what is meant by "Sapien language" in this discussion is referring to basic linguistic abilities and not to certain languages such as English, Chinese, Arabic, and so on, all of which are language variants. Several groups of Sapiens used various language varieties to communicate at the period of the Cognitive Revolution.

Sapiens is not the first or only creature to communicate. Communication is not only Sapiens'. Every animal knows how to communicate. Even insects, such as bees and ants, know how to communicate, for example, by telling each other where there is food (Nieh & Nieh, 2004; Oi et al., 1994). Many animals, including apes and monkeys, make certain sounds in communication. Veterinarians (zoologists) have identified one type of sound emitted from the green monkey's mouth which means "Watch out! There's an eagle!" This type of voice is different from other types of voice, which means "Watch out! There's a lion!" (Price & Fischer, 2014). When veterinarians played the first recorded sound to a group of green monkeys, they immediately stopped their activity and simultaneously looked up in fear as their predator from the sky was about to snatch them¹. When the same group of monkeys heard a second recorded sound, warning of the presence of a lion, the monkeys did not look up but dashed towards the nearest tree and climbed it, a safe way from the lion's pursuit. Like green apes, elephants and whales also have equal communication skills (McComb et al., 2003). Parrots can imitate any sound that humans make; they can even imitate the sound of a telephone or the sound of a door slamming.

Another thing to understand related to early human communication is that gossip helped early Homo sapiens form larger and more stable bands, and it took place roughly between 70,000 and 30,000 B.C.E (Brownholtz, 2021). The gossip theory founded by the anthropologist Robin Dunbar (1996) in his book "Grooming, Gossip, and the Evolution of Language" that grooming, a social bonding activity still used by our monkey relatives, was supplanted by language and, consequently,

by gossip. A recent study by scientists proved gossip's influence on "vicarious learning" and "social connection" (Jolly & Chang, 2021). In other words, the networks of Homo sapiens were getting too big for everyone to properly groom everyone else, and humans needed something that would help them stay in touch with friends and relatives as they dispersed over distances.

So when were the ancient Sapiens able to increase their ability to communicate from the level of animal communication to the level of human communication? What is so special about our language? History and biology show how humans initially communicated through language, but communication experts almost never use these two disciplines as a reference in the study of communication. Communication theory only recognizes seven traditions as stated by Craig (1999): 1) cybernetic, 2) socio-psychological, 3) socio-cultural, 4) critical, 5) rhetorical, 6) phenomenological, 7) semiotic (Craig, 2016). From this, we see that communication studies only uses three disciplines—linguistics, social science, and psychology—in building communication theory. History and biology are not included. History and biology should also be an important part of the study of communication theory. This article aims to show how the sciences of history and biology have played a major role in building our understanding of the beginnings of human communication as a foundation for understanding communication itself.

The study of human communication history is currently very limited and even if there is, it is still limited to the discussion of the history of mass media such as newspapers, radio, and television, which began to appear at the end of the 19th century. There is no communication study that discusses how humans (Homo sapiens) first, tens of thousands of years ago, communicated as humans. How did Sapiens create a language that distinguished themselves from animals? How did prehistoric humans use language to build group communication so that they became effective hunters and gatherers?

Methods

Research method used in this study is the qualitative approach where it utilizes a review of the relevant academic publication to provide a comprehensive explanation of the raised questions. Thus this study uses a literature review approach with the object of research or the unit of analysis is the history of human communication. To conduct the review, an extensive and integrative search of articles published in major organizational academic research was performed. The integrative approaches systematic literature review used in this article differs from meta-analysis as it does not utilize econometric and statistical procedures for data synthesis and analysis. The validity of the data is conducted by comparing various similar studies that have been published in various books and journals and analyzing the results.

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Result and discussion

Humans now can invent and connect around concepts that don't exist (think of religion, commerce, and politics), something no other form of life has ever done. These common inventions have allowed people to colonize the world and have brought humanity dangerously close to defeating the forces of natural selection. The following sections examine the various factors that made up how Homo sapiens consolidated and used communication to unite, develop and become rulers on earth. These factors include creating abstract objects, gossip like, building group communication and creating fiction and myth.

Creating abstract objects

In addition to its ability to convey information about concrete objects that exist in the world, the true and greatest ability of the modern Sapiens language is to convey something that simply does not exist in this world. Only Sapiens can speak of something that has never been seen with the eye, touched with a finger, or smelled with the nose. Sapiens create abstract nouns that cannot be detected by their own five senses. Animals are only able to convey information about real or concrete objects: trees, rivers, lions, water, and so on. But only Sapiens can convey information about gods, spirits, curses, blessings, fate, religion, and so on. Who has ever seen a god, spirit, or curse? Nothing ever! Because everything mentioned is just fiction or myth. Everything exists only in the imagination. The most distinctive quality of the Sapiens language is its capacity to communicate fiction, myth, and imagination. Only sapiens can talk about something that doesn't exist. The emergence of Sapiens' ability to convey something imaginary was the beginning of the Cognitive Revolution.

This ability to imagine fiction or something imaginative can be done collectively. We can together imagine abstract things like spirits, ghosts, and gods. This ability to imagine myth and fiction together gave Sapiens the unprecedented ability to work flexibly with large numbers of humans. The animal world also knows cooperation. Although ants and bees may work together in vast groups, they only interact with close relatives and in a regimented manner (Mersch et al., 2013). More adaptably than ants, wolves and chimpanzees can collaborate, but only when there are a limited number of known individuals (Boesch, 2015). Sapiens can work very flexibly with so many other people they never really know. This is the reason Sapiens can rule the world.

Gossip like

According to one explanation, the Sapien language's distinctiveness stems from its role as a conduit for knowledge about the outside world. Nevertheless, rather than talking about the world around humans, the most significant information that needs to be communicated is about humans themselves, such as animals, rivers, or trees. Our language evolved as an instrument for talking about other people. According to this theory, humans use language more for the purpose of gossiping (Dunbar, 2004). Homo sapiens are social animals, and social co-operation is the key to safety and reproduction goals. Sapiens don't just need information about threats

or the presence of food sources. The more important information for them is the stories about the people around them: Who hates whom? Who sleeps with whom? Who is honest? Who is the liar?

In a Sapien group, everyone feels the need to know the relationship of each individual to other individuals. Sapien's ability to obtain and store information about these individual relationships is astounding. If a group consists of 50 members, then there are 1,225 combinations of relationships between individuals with all the dynamics and changes in these relationships, not including other forms of social relations, which are numerous and all of which need to be known and remembered (Dunbar, 2004). All apes, including Neanderthals and ancient Homo sapiens, show an interest in information about social relationships, but they show no interest in gossip. Only modern Sapiens likes to gossip – behavior that is actually negative but important for collaborations that involve large numbers of people. This new linguistic skill that sapiens mastered some 70,000 years ago allowed them to gossip for hours (Harari, 2015). Information about who can be trusted allows the group to choose a credible leader so that sapiens can develop a more robust and sophisticated type of collaboration. This allows small groups to develop into large groups. Gossip becomes a kind of intelligence data that is used to make strategic decisions in groups.

This gossip theory seems like a joke, but a number of scientific studies support this view (McAndrew & Milenkovic, 2002; Dunbar, 2004; Foster, 2004; Feinberg et al., 2014). Even now, the majority of human contact, whether it takes the form of an email, a phone call, or a newspaper column, is frequently more gossip. Conversations among employees in the office, or among workers in their workplaces, or conversations at meetings between professionals were not dominated by serious topics about their world of work but more about things outside of that: the issue of salary increases, facilities or services, benefits, who buys a new car, who gets promoted, who will be laid off, relationships with bosses or relationships with other employees. In short, let's talk about gossip. It seems that the language we use evolved to fulfill this purpose of gossiping.

Building group communication

The closest relatives of sapiens today are chimpanzees, which have social behavior that is somewhat similar to that of humans. Chimpanzees usually live in small groups of a few dozen individuals (Waal, 2007; Boesch, 2002). They have close friendships, hunt together and fight together against other animals such as baboons and cheetahs. The social structure of chimpanzees tends to be hierarchical. The leader of the group is a male chimpanzee who is referred to as the "alpha male. Other male chimpanzees as well as females show their obedience to the alpha male by bowing their bodies in front of him. Alpha always tries to maintain group harmony. If there are two members fighting, then the alpha will intervene and stop the fight. As the leader of the group, the alpha gets priority in getting food and the female chimpanzee.

If two male chimpanzees want to take over the alpha position, they usually build a coalition with as many other members as possible. The coalition is built through daily contact with other members through touching, hugging, kissing, and helping each other. Much like modern politicians during a campaign, they are busy

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approaching their supporters, greeting them and holding and kissing the babies they are carrying. As a result, candidates for the alpha role in a group of chimpanzees frequently embrace, hug, and kiss young chimpanzees. A broad and stable coalition is usually led by the alpha male, not necessarily because he is the strongest physically. These coalitions play an important role not only during the open competition for the alpha position but in almost all day-to-day activities. Coalition members spend more time together, share food, and help each other in times of trouble.

The world of chimpanzees teaches us how to build effective group communication. For a group to function properly, all members must know each other intimately. There is a limit to the number of members that can form and maintain groups. In other words, a group should not have too many members so as not to break up easily. Two chimpanzees who have never met, never fought, and have never helped each other will never know whether they will be able to trust each other, whether it is worthwhile to help an unknown individual, and which of them has a higher position. tall. Under natural conditions, a group of chimpanzees has about 20 to 50 members (de Waal, 1998; Wilson & Wrangham, 2003). The greater the number of members in the group, the more vulnerable the group is to instability, and in the end, there is a split in the group and the formation of a new group. According to animal experts, not many groups of chimpanzees have more than a hundred members. Two different groups rarely cooperate and tend to compete with each other for territory and food.

Two chimpanzee groups that were continuously at odds with one another were discovered and documented by researchers., and even a 'genocide' in which one group carried out a systematic massacre of most members of a rival group (de Waal, 1998).

The same pattern probably occurred in early human social life, including that of ancient Homo sapiens. Humans, like chimpanzees, possessed social tendencies that enabled our forebears to form friendships, establish social hierarchies, and engage in joint activities like hunting and combat. Human social ties, however, are restricted to small groups in which individuals have tight relationships with one another, much like chimpanzee social instincts. When the number of members increases and the group becomes too large, the social order of the group becomes shaky and divided. The large number of members makes social relations unfamiliar, even strangers. Even if a group lived in a fertile area capable of providing food for 500 ancient Sapiens, it is not possible for individual members to co-exist with other members they are not very familiar with (Harari, 2015). It is difficult for them to determine who should lead, who should hunt where, or who should mate with whom. After the start of the Cognitive Revolution, gossip assisted Homo sapiens in creating larger and more stable groups (de Ruiter et al., 2011). But, the power of rumors to keep a group together has its bounds. According to sociological studies, 150 people make up the ideal size of a group (Harari, 2015). No group can survive if its members exceed 150, no matter how intimate they are or how effectively they gossip (Harari, 2015).

Even today, the critical threshold for the number of members of a human organization is around this magic number of 150 people. Below this threshold, a community, a business group, a social network, or even a military unit can still maintain their unity based solely on close relationships and gossip (Dunbar, 2004). No formal hierarchy or position is needed, and laws and regulations are needed to maintain group cohesion. A troop platoon of 30 soldiers, or even a business unit with a hundred workers, could still function well just based on close relationships. An informal group with fewer than 150 members can still choose their leader naturally. The selection of leaders is based on pre-existing "intelligence data" or gossip. They know the quality of a person based on the chatter and gossip among the members, so there is no difficulty in choosing the best person. A group of thugs can easily choose their leader based on the experiences and stories among the members. A family-owned business can function successfully without a chief executive officer, a board of directors, or an accounting division.

Nevertheless, the group can no longer operate at its best when the 150-member barrier is reached (Dunbar, 2004). Leading 150 people is not the same as leading 1000 people. A military commander cannot lead an army of 1000 members based solely on close relationships. A successful family business begins to face a crisis when the business group in question hires more employees. The company is on the verge of splitting up.

Creating fiction and myth

How are Homo sapiens able to and succeed in forming groups with a number of members exceeding the 150 threshold? For example, building a company with thousands of employees, building a city with a population of hundreds of thousands of people, or even building a country or empire consisting of millions of citizens. The secret lies in fiction or myth. If they share the same myth, many strangers can collaborate effectively without knowing one other.

Every large-scale human partnership, whether it be between a country, a group of churches, or a massive enterprise, has its roots in a myth that is unique to human imagination. The shared myths that the church's members hold dear are the foundation of its community. Considering that they both consider God to have been a human and permitted Himself to be crucified in order to suffer the sins of mankind, two Catholics who have never met will agree to go together to fight in the crusade or donate their wealth to build a hospital. The formation of the state is rooted in the myth of shared nationalism. As a result of their shared belief in the existence of a nation, bloodshed, a flag, and the independent state of their dreams, two freedom fighters who have never met one other will aid one another or even risk their lives. The myth of the common law serves as the foundation for the American legal system. Because of their shared belief in the legitimacy of law, justice, human rights, and the recognition they will receive, two lawyers who have never met can collaborate to defend a client they have never met. What is believed is only in the stories that are created and retold to others. No nation, no money, human rights, law, justice, and even God are beyond the common imagination of mankind. All these things exist only in the human imagination.

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It is not difficult to understand that the "primitive tribes" established their social bonds by believing in the existence of supernatural beings such as spirits or spirits, and they gathered on each full moon in a ceremony led by a shaman in which a number of people performed a sacred dance around a fireplace. Shamans are thought to bring spirits, which tribesmen believe have the power to help human life, increase crop yields, or protect humans from disaster; however, this is all fiction, created only in their imaginations. But this fictional power is able to build cities, countries, empires, and multinational companies that have hundreds of thousands of employees and bring huge profits to anyone who is able to control them.

How can millions of people believe in something that can't be physically proven, like believing in gods, or nations, or corporations? The key lies in the fictional story that is delivered. A story that succeeds in making people believe it gives Sapien great power because it enables millions of people who do not know each other willingly to work together to achieve a common goal. Just imagine how difficult it is to build a state, a legal system, or a church system if we only talk about things that physically exist, like rivers, trees, or lions.

People have been creating intricate webs of stories for many years. In this network, fictional entities like the government, the church, and businesses not only exist but also have significant authority. "Fiction," "social construct," or "imaginary reality" are terms used to describe objects that people have constructed through this network of stories. A made-up reality is not a fabrication. Everyone believes in the reality of imagination, and as long as this widespread conviction endures, this fictional reality will continue to have influence on the world.

Around 70 000 years ago, the Cognitive Revolution began., Sapiens has lived in two realities: an objective reality and an imaginary reality. As time goes by, the reality of imagination becomes stronger and stronger. In the end, objective reality even depends on the reality of imagination. Today, the survival of objective realities such as forests, rivers, and tigers often depend on the mercy of imaginary realities such as corporations, governments, and Google. How many people have seen a tiger with their own eyes? But they knew the tiger was from Google. Corporations and governments can clear forests to open new businesses or replant land into forests.

The ability to create an imaginary reality allows large numbers of people who do not know each other to work together effectively. Since myth is a major foundation for human collaboration, telling different stories can shift the myths that underpin human cooperation. Myths can easily change in the proper environment and at the appropriate time. In 1789, French society saw a fast-paced shift from myths about the sacred rights of kings to myths about the sovereignty of the people. Since the Cognitive Revolution, Homo sapiens have been able to change their behavior rapidly according to changing needs. Homo sapiens soon left humans and other animals behind in terms of their ability to cooperate.

Conclusion

Based on the discussion above this article conclude: 1) Sapiens first communicated as humans when they were able to create abstract objects, which are things that simply don't exist in this world. Sapien is a leader over other animals because of this ability. 2) Effective group communication builds on Sapien's pleasure in gossip. 3) Ultimately, the ability to construct fiction and myth allowed Sapien to build organizations, nations, and even empires. Finally, as a recommendation from this article, it is a consideration to make history and biology two new traditions in communication studies, adding seven traditions that already existed.

References

- Boesch, C. (2002). Cooperative hunting roles among Tã chimpanzees. *Human Nature*, 13(1), 27–46. <https://doi.org/10.1007/S12110-002-1013-6/METRICS>
- Boesch, C. (2015). The real chimpanzee: Sex strategies in the forest. *The Real Chimpanzee: Sex Strategies in the Forest*, 1–182. <https://doi.org/10.1017/CBO9780511627132>
- Brownholtz, M. (2021, May 28). Feeling Socially Rusty? Try a Little Light Gossiping. *The New York Times*.
- Craig, R. T. (2016). Traditions of Communication Theory. *The International Encyclopedia of Communication Theory and Philosophy*, 1–10. <https://doi.org/10.1002/9781118766804.WBIECT119>
- de Ruiter, M. B., Reneman, L., Boogerd, W., Veltman, D. J., van Dam, F. S. A. M., Nederveen, A. J., Boven, E., & Schagen, S. B. (2011). Cerebral Hyporesponsiveness and Cognitive Impairment 10 Years After Chemotherapy for Breast Cancer. *Human Brain Mapping*, 32(8), 1206–1219. <https://doi.org/10.1002/HBM.21102>
- de Waal, F. (1998). *Chimpanzee Politics: Power and Sex among Apes: Revised Edition*. 235. https://books.google.com/books/about/Chimpanzee_Politics.html?hl=id&id=XsrhU2vV5PIC
- Dunbar, R. I. M. (2004). Gossip in evolutionary perspective. *Review of General Psychology*, 8(2), 100–110. <https://doi.org/10.1037/1089-2680.8.2.100>
- Feinberg, M., Willer, R., & Schultz, M. (2014). Gossip and Ostracism Promote Cooperation in Groups. <https://doi.org/10.1177/0956797613510184>, 25(3), 656–664. <https://doi.org/10.1177/0956797613510184>
- Foster, E. K. (2004). Research on Gossip: Taxonomy, Methods, and Future Directions. <https://doi.org/10.1037/1089-2680.8.2.78>, 8(2), 78–99. <https://doi.org/10.1037/1089-2680.8.2.78>
- Gibbons, A. (2007). Paleoanthropology. Food for thought. *Science (New York, N.Y.)*, 316(5831), 1558–1560. <https://doi.org/10.1126/SCIENCE.316.5831.1558>

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- Harari, Y. N. (2015). *Sapiens: A Brief History of Humankind-Signal Books*. <https://www.scribd.com/book/253264900/Sapiens-A-Brief-History-of-Humankind>
- Harari, Y. N., Harari, Y. N., Purcell, J. (Translator), & Watzman, H. (n.d.). *Sapiens : a brief history of humankind*. 443. Retrieved July 14, 2023, from <https://books.google.com/books/about/Sapiens.html?hl=id&id=FmyBAwAAQBAJ>
- McAndrew, F. T., & Milenkovic, M. A. (2002). Of Tabloids and Family Secrets: The Evolutionary Psychology of Gossip1. *Journal of Applied Social Psychology*, 32(5), 1064–1082. <https://doi.org/10.1111/J.1559-1816.2002.TB00256.X>
- McComb, K., Reby, D., Baker, L., Moss, C., & Sayialel, S. (2003). Long-distance communication of acoustic cues to social identity in African elephants. *Animal Behaviour*, 65(2), 317–329. <https://doi.org/10.1006/ANBE.2003.2047>
- Mersch, D. P., Crespi, A., & Keller, L. (2013). Tracking individuals shows spatial fidelity is a key regulator of ant social organization. *Science (New York, N.Y.)*, 340(6136), 1090–1093. <https://doi.org/10.1126/SCIENCE.1234316>
- Nieh, J., & Nieh, J. C. (2004). Recruitment communication in stingless bees (Hymenoptera, Apidae, Meliponini). *Apidologie*, 35(2), 159–182. <https://doi.org/10.1051/APIDO:2004007>
- Price, T., & Fischer, J. (2014). Meaning attribution in the West African green monkey: influence of call type and context. *Animal Cognition*, 17(2), 277. <https://doi.org/10.1007/S10071-013-0660-9>
- Waal, F. B. M. de (Frans B. M.). (2007). *Chimpanzee politics : power and sex among apes*. 235.
- Wilson, M. L., & Wrangham, R. W. (2003). Intergroup relations in Chimpanzees. *Annual Review of Anthropology*, 32, 363–392. <https://doi.org/10.1146/ANNUREV.ANTHRO.32.061002.120046>
- Zhang, J., Webb, D. M., & Podlaha, O. (2002). Accelerated protein evolution and origins of human-specific features: Foxp2 as an example. *Genetics*, 162(4), 1825–1835. <https://doi.org/10.1093/GENETICS/162.4.1825>