

# Generative Artificial Intelligence and Transylvanian Saxon Cultural Heritage.

Opportunities and threats for its  
appropriation, preservation and further development

Johann Lauer

*Generative Artificial Intelligence (AI) opens up a variety of opportunities for the appropriation, preservation and further development of cultural heritage, but it also harbors new threats. The following article will examine the opportunities and threats that arise for the Transylvanian Saxons, their organizations and all those who are committed to the preservation and further development of their cultural heritage in the time of generative AI.*

## Introduction: starting points, questions and approach

The preservation and further development of a community and its identity is achieved through discussions about its cultural heritage. The vitality and sustainability of a cultural heritage is guaranteed by the study and development of this heritage. The institutions and organizations that are committed to a heritage are also of crucial importance.

Cultural heritage manifests itself in two forms, namely material and immaterial heritage. Material heritage includes physical objects such as artifacts in museums and buildings, while intangible heritage – the “invisible baggage” – manifests first in people themselves. It is passed on primarily through oral traditions and written records. The first written records were initially in analogue form: papyrus, parchment and paper (from the 12<sup>th</sup> century) were the main materials, with stone, wood, ivory and wax also used. However, since the Gutenberg Revolution in the 15<sup>th</sup> century, written records have been predominantly transmitted on paper in the form of books, magazines and newspapers.



Johann Lauer. E-Mail: [johann@lauer.biz](mailto:johann@lauer.biz). Homepage: [lauer.biz](http://lauer.biz).

Generative Artificial Intelligence and Transylvanian-Saxon Cultural Heritage.  
Opportunities and threats for acquisition, preservation and further development.

Quelle: [siebenbuergensachsen.de/generative-ai-saxon.pdf](http://siebenbuergensachsen.de/generative-ai-saxon.pdf).

The advent of *digital media* in the 20<sup>th</sup> century marked a significant turning point in the evolution of media and communication. The process of digitization commenced with the establishment of the inaugural knowledge databases in the 1950s, and has since undergone an exponential surge following the advent of the World Wide Web in the 1990s. The emergence of generative AI will further accelerate this development. While the aforementioned storage media merely permit the passive storage of content, generative AI is additionally capable of modifying content autonomously. The advancement of cultural heritage has hitherto been conducted exclusively by humans. With generative AI, it is now possible for large language models (LLMs) to make machine changes with the help of algorithms. It is therefore necessary for everyone who has an interest in safeguarding and further developing cultural heritage to prepare for this development and take the necessary steps.

The amount of digital information has grown to a much greater extent than that of analogue publications, creating an information flood. Digital communication and digital publications have therefore become just as important as personal communication and analogue publications. Cultural debates are therefore increasingly being conducted via digital media. The digital visibility of cultural heritage is therefore of crucial importance.

The Transylvanian Saxons, spread across the world, have another special feature: since the end of the 20<sup>th</sup> century, their cultural heritage has been one of the last remaining bonds holding the Transylvanian Saxon community together worldwide and shaping the Transylvanian Saxon identity.

- What opportunities and threats does the advent of generative AI present for the appropriation, preservation and further development of a cultural heritage?
- What special features characterize the community of Transylvanian Saxons? What resources and prerequisites are available within this community for digital communication and digital publication? What deficiencies are there?
- What tasks and challenges must the Transylvanian Saxons and their associations address in order to ensure the appropriation, preservation, perception and further development of their heritage in the context of generative AI?



**Johann Lauer.** E-Mail: [johann@lauer.biz](mailto:johann@lauer.biz). Homepage: [lauer.biz](http://lauer.biz).

Generative Artificial Intelligence and Transylvanian-Saxon Cultural Heritage.  
Opportunities and threats for acquisition, preservation and further development.

**Quelle:** [siebenbuergensachsen.de/generative-ai-saxon.pdf](http://siebenbuergensachsen.de/generative-ai-saxon.pdf).

In the following, the opportunities and threats of generative AI for the appropriation, preservation and further development of a cultural heritage will be discussed. Subsequently, an analysis of the specific challenges currently facing the cultural heritage of the Transylvanian Saxons is presented. This will entail an examination of the extent to which a shared online space on the Internet can serve as a replacement for a lost shared physical space in Transylvania.

The process of digitization represents an invaluable tool for the safeguarding and development of cultural heritage, as it facilitates both digital communication and digital publication. With regard to the Transylvanian Saxons, two statements can be posited, one affirmative and the other negative. It is important to acknowledge that substantial resources and conducive conditions have been established in the past to address the evolving responsibilities and challenges. Nevertheless, it is also important to note that a comprehensive and systematic digital cataloguing or even digital publication of cultural heritage has yet to be undertaken. Finally, it will be shown to what extent the Internet can and should be used as an information infrastructure for Transylvanian Saxons. I would like to point out two particular tasks and challenges that I believe are crucial for the appropriation, preservation and further development of Transylvanian Saxon cultural heritage in the age of generative AI.



**Johann Lauer.** E-Mail: [johann@lauer.biz](mailto:johann@lauer.biz). Homepage: [lauer.biz](http://lauer.biz).

Generative Artificial Intelligence and Transylvanian-Saxon Cultural Heritage.  
Opportunities and threats for acquisition, preservation and further development.

**Quelle:** [siebenbuergensachsen.de/generative-ai-saxon.pdf](http://siebenbuergensachsen.de/generative-ai-saxon.pdf).

## Generative Artificial Intelligence: Opportunities and Threats

Generative AI is a powerful tool that can usually provide high-quality answers to human requests, questions and clues, called *prompts*. It calculates the statistically most likely word combinations for the input given in the prompt.

Using generative AI is not difficult. There are several large language models (LLMs), of which those from Google and Microsoft are the most widely used. Using these products only requires installing an app on the PC, smartphone or tablet, for example Bing from Microsoft or Gemini from Google. This allows the user to enter verbal or written questions, which are then answered immediately. Communication with generative AI is conducted in a manner analogous to human interaction. In my article [Philosophy of generative artificial intelligence. Theoretical limitations and possibilities, practical benefits and threats of large language models \(lauer.biz/generative-ai.pdf\)](https://lauer.biz/generative-ai.pdf), I discussed the foundations of generative AI in more detail. I will only touch on them briefly here.

To explain the philosophical foundations of generative AI, I have applied fundamental philosophical questions (axiological, epistemological, methodological, and ontological) from the field of philosophy of science to generative AI. In my view, big data forms the subject matter or ontological foundations, algorithms form the methodology (methodological foundations), and training is done using epistemic and axiological foundations. These four areas can be ideally distinguished.

The Transylvanian-Saxon cultural heritage has also been the subject of generative AI applications, but only the part that is digitized and publicly accessible. This data is part of the field of generative AI. The algorithms ensure that the questions can be answered by machine. Training with epistemic values aims to promote the generation of true answers and prevent the production of false ones. Taking into account axiological values (ethical, social, political, etc.) should promote civilized debate and prevent offensive and destructive communication.

The providers have the final say in determining the above-mentioned principles. However, users or organizations that feel committed to a particular legacy can exert



**Johann Lauer.** E-Mail: [johann@lauer.biz](mailto:johann@lauer.biz). Homepage: [lauer.biz](https://lauer.biz).

Generative Artificial Intelligence and Transylvanian-Saxon Cultural Heritage.  
Opportunities and threats for acquisition, preservation and further development.

**Quelle:** [siebenbuergensachsen.de/generative-ai-saxon.pdf](https://siebenbuergensachsen.de/generative-ai-saxon.pdf).

an indirect influence. The providers want to provide answers of the highest possible quality; their economic success depends on this. To do so, they first need the highest possible quality of data. Google and Microsoft have been storing all data that is publicly available on the Internet for more than two decades. As an example of their thoroughness, their Web archives even contain almost every change made to a website over time. In practice, all publicly available data on a topic can therefore indirectly determine the answers, as these data are used by the providers. The hunger for data will continue in the future, so this also applies to all data that will be published publicly in the future. While the methodological principles are determined solely by the providers, there are again indirect ways of influencing the answers during the training.

The quality of the answers currently depends to a large extent on the cooperation of the users. These can use epistemic values to identify so-called hallucinations, i.e. information that is simply false, and report them to the providers. Furthermore, the providers are obliged to comply with the applicable laws. They would also do well to respect the axiological values of their users. As a result, the axiological or value-based reactions of the users are also taken into account by the providers.

The following is very important for the Transylvanian Saxons and their associations: the answers can be influenced *indirectly*, firstly by *digitizing* and digitally publishing the cultural heritage as completely as possible, and secondly by using and thus indirectly *training* the language models. In order for this indirect influence to be as successful as possible, one should be aware of the theoretical limits and possibilities of generative AI as well as of its practical opportunities and threats.

*Theoretical possibilities:* Large language models (LLMs) are able to manage all digital data that has been publicly available to date, as well as an exponentially growing amount of data in the future, and generate answers from them in fractions of a second. Billions of queries can be processed simultaneously.

*Theoretical limits:* Despite its excellent performance, generative AI only has *narrow intelligence* because it cannot understand text. The quantitative methodology of generative AI enables correct *syntax*, but not *semantics*; hence the term “*stochastic*”



**Johann Lauer.** E-Mail: [johann@lauer.biz](mailto:johann@lauer.biz). Homepage: [lauer.biz](http://lauer.biz).

Generative Artificial Intelligence and Transylvanian-Saxon Cultural Heritage.  
Opportunities and threats for acquisition, preservation and further development.

**Quelle:** [siebenbuergensachsen.de/generative-ai-saxon.pdf](http://siebenbuergensachsen.de/generative-ai-saxon.pdf).

*parrot*". A comparison with human intelligence shows what is still missing for an AI robot to become an acting artificial expert that can solve problems like a human: perception, consciousness, self-awareness and self-knowledge. The great goal of a general, human or *strong AI* is still a long way off. *Superintelligence* was, and for the time being remains, *science fiction*. Generative AI also lacks the means to ensure the *transparency* and *reliability* of the answers.

*Practical benefits*: I think generative AI can be compared to a digital librarian who, like a search engine, can provide information about all the texts available to him. Generative AI can summarize large amounts of text, generate new texts, improve texts grammatically and stylistically, and translate them into different languages. In addition, the large language models (LLMs) can also be used to generate software codes, and these language models are applicable not only to texts, but also to audios, images, and videos.

*Practical threats*: The most serious dangers include the almost inexhaustible possibilities of *disinformation* that blur the distinction between fact and fiction, as well as *uncritical techno-solutionism*, which is characterized by a blind trust in technology. In my opinion, Noam Chomsky makes the last point accurately when he describes language models as *digital plagiarists*. The models are only able to *compile* and *paraphrase* existing knowledge. In my opinion they are not able to generate *fundamental innovations*. And then there are the potential threats that arise from the fact that a small number of large corporations determine at their own discretion which data (content), algorithms and axiological and epistemic values are used.

## **Transylvanian Saxons: from a fortress to an open club, or from the seven seats to the seven countries**

The following is a brief description of the characteristics of the Transylvanian Saxon community and its institutions. In a first step, I will explain which institutions have shaped the Transylvanian Saxon community over the centuries. In a second step, I will show how the transformation from a fortified castle to an open club took place. A more comprehensive historical overview with references to further literature is presented in the following article: Transylvanian Saxons - yesterday, today, tomorrow. From a



**Johann Lauer.** E-Mail: [johann@lauer.biz](mailto:johann@lauer.biz). Homepage: [lauer.biz](http://lauer.biz).

Generative Artificial Intelligence and Transylvanian-Saxon Cultural Heritage.  
Opportunities and threats for acquisition, preservation and further development.

**Quelle:** [siebenbuergensachsen.de/generative-ai-saxon.pdf](http://siebenbuergensachsen.de/generative-ai-saxon.pdf).

fortified castle to an open club ([Siebenbürger Sachsen - gestern, heute, morgen. Von einer festen Burg zu einem offenen Club](#)).

### **The settlement in Transylvania constitutes a component of the broader medieval settlement of Eastern Europe**

As part of the movement of eastern settlement in Europe, settlers from Western Europe, especially from the Rhine-Moselle region, migrated to Transylvania from the 12<sup>th</sup> century onwards and settled on the so-called royal land of the Hungarian kings. There they founded the community of Transylvanian Saxons. This community can be seen as a fortified castle that surrounded all members and was of existential importance for the individual.

The basis of the community was the Golden Charter of 1224, also called *Andreanum* because it was issued by the Hungarian King Andrew II. The *Andreanum* enabled the settlers to establish an autonomous settlement area in the royal domain. They were granted the right to self-determination and were encouraged to be united as a community (*unus sit populus*).

### **Fortified churches for protection against Mongols and Ottomans**

The Transylvanian Saxon *fortified churches* ensured physical survival for centuries. As early as the 12<sup>th</sup> century, the churches were surrounded by fortifications, which were further developed into defensive structures from the 13<sup>th</sup> century onwards due to the great Mongol storms (1241, 1242, 1285 and 1299). In the 14<sup>th</sup> and 15<sup>th</sup> centuries, the fortified churches were expanded into comprehensive defensive structures, and the peak of fortified church construction came in the 16<sup>th</sup> century. These were now primarily intended to protect against the Ottoman attacks to which the country was exposed from the 14<sup>th</sup> to the 18<sup>th</sup> century. Even today, around 190 fortified churches still characterize the Transylvanian landscape.

### **Identity-forming institutions**

Over time, in addition to the physical defensive walls, other *spiritual* walls were established that strengthened cohesion and guaranteed the survival and preservation of the cultural independence of the Transylvanian Saxons in Transylvania until the end



**Johann Lauer.** E-Mail: [johann@lauer.biz](mailto:johann@lauer.biz). Homepage: [lauer.biz](http://lauer.biz).

Generative Artificial Intelligence and Transylvanian-Saxon Cultural Heritage.  
Opportunities and threats for acquisition, preservation and further development.

**Quelle:** [siebenbuergensachsen.de/generative-ai-saxon.pdf](http://siebenbuergensachsen.de/generative-ai-saxon.pdf).

of the 20<sup>th</sup> century. These included the Saxon National University, the Evangelical Church of the Augsburg Confession in Romania, the German language and a strong neighborhood and association system.

The threat from the Ottomans and the threat to legal autonomy from the Hungarian nobility and sometimes also from the central power prompted the urban bourgeoisie to politically unite the German settler communities in Transylvania. In 1486, the *Saxon National University* (*universitas saxonum*, i.e. the totality of all Saxons) was founded, based on the Andreamum. For centuries, this had a similar significance for individuals as today's citizenship. It functioned as a common judicial, administrative and political authority that carried out sovereign tasks. In 1876, the Saxon National University lost its sovereign rights and with it the Transylvanian Saxons lost their political and legal autonomy after more than seven centuries. Until its final dissolution in 1937, the Saxon National University functioned as a foundation and managed the assets accumulated over the centuries.

In addition, there was the *religious bond*. On the initiative of Johannes Honterus, councilor of Kronstadt/Brasov, and Peter Haller, mayor of Hermannstadt/Sibiu, a Church Order for all Germans in Transylvania ("*Kirchenordnung aller Deutschen in Sybembürgen*") was printed. In 1550, the Saxon National University introduced this church order in all German towns and communities in Transylvania. This created a "spiritual university" (Konrad Gündisch): the "*ecclesia Dei nationis Saxonicae*". This applied to all Transylvanian Saxons, not only to those living on royal soil.

During the Reformation in the 16<sup>th</sup> century, the Transylvanian Saxons converted to Protestantism. They became members of the Evangelical Church A.B. (Augsburg Confession or *Confessio Augustana, CA*). The Evangelical Church in Transylvania is still based on this confession. The vast majority of the population of Transylvania belonged to other Christian denominations. The exception was the Jews, who had another religion.

The Transylvanian Saxons were also linguistically distinct from all the other inhabitants of the country. In private life, the Transylvanian Saxon dialect was spoken, which is



**Johann Lauer.** E-Mail: [johann@lauer.biz](mailto:johann@lauer.biz). Homepage: [lauer.biz](http://lauer.biz).

Generative Artificial Intelligence and Transylvanian-Saxon Cultural Heritage.  
Opportunities and threats for acquisition, preservation and further development.

**Quelle:** [siebenbuergensachsen.de/generative-ai-saxon.pdf](http://siebenbuergensachsen.de/generative-ai-saxon.pdf).



similar to the relict dialects of Luxembourg and the Moselle, while in church, school and administration modern German had been the predominant language since the Reformation. In 1722, compulsory education was introduced for boys and girls, who had to read, write and learn the catechism in standard German. This made the Transylvanian Saxons one of the first in Europe to have compulsory education.

Brotherhoods, sisterhoods and neighborhoods, which were generally compulsory for the whole community from a certain age, were a special feature of Transylvanian Saxon villages. Membership was granted after confirmation. They were similar in structure, organization and function to the journeymen's and guild brotherhoods in the Saxon markets and towns.

In the middle of the 19<sup>th</sup> century, special-purpose associations were set up, which people joined voluntarily. Associations were formed in the fields of culture, business, science, protection and assistance, leisure, socializing, youth and the elderly. The principles of autonomy, self-government, self-help and mutual aid, which had been practiced for centuries not only in the Saxon National University but also in the Church and in the primary groups (brotherhoods, sisterhoods and neighborhoods), could be taken to a new level with the new institutions.

These spiritual and physical walls figuratively formed the Transylvanian Saxon fortified castle in which the Transylvanian Saxon community lived and developed from the 12<sup>th</sup> century until the end of the 20<sup>th</sup> century. As with other national and religious minorities, a strong sense of community developed, characterized by tolerance towards other nations and religions: a "defensive tolerance" (Hans Bergel) that is exemplary even by today's standards.

The aforementioned Transylvanian Saxon institutions and organizations were of existential importance and guaranteed that every citizen was part of the Transylvanian Saxon community from the cradle to the grave, secured and integrated by a comprehensive network of social relations. Life outside the community was virtually impossible for the vast majority. The following lines from the poem "Stay faithful"



**Johann Lauer.** E-Mail: [johann@lauer.biz](mailto:johann@lauer.biz). Homepage: [lauer.biz](http://lauer.biz).

Generative Artificial Intelligence and Transylvanian-Saxon Cultural Heritage.  
Opportunities and threats for acquisition, preservation and further development.

**Quelle:** [siebenbuergensachsen.de/generative-ai-saxon.pdf](http://siebenbuergensachsen.de/generative-ai-saxon.pdf).

(*Bleibe treu*) by Michael Albert (1836-1893), poet, teacher and writer, describe the situation in the 19<sup>th</sup> century quite realistically:

“However necessity may press and compel,  
Herein lies the strength to resist;  
Step out of the sacred ring,  
And you shall fade without honor”.

*Wie die Not auch dräng´ und zwingt,  
Hier ist Kraft, sie zu bestehn;  
Trittst du aus dem heil´gen Ringe,  
Wirst du ehrlos untergeh´n.*

These institutions, briefly presented here, formed the defensive walls that held the community together and guaranteed the cultural and political autonomy of the German settlers in Transylvania, the Transylvanian Saxons, for centuries. In this way, a rich cultural heritage was created over the centuries, even as the community found itself within the borders of different states:

1. from the middle of the 12<sup>th</sup> century to 1541, in the medieval Kingdom of Hungary;
2. from 1541 to 1699, in the autonomous Principality of Transylvania under the sovereignty of the Sultan and thus part of the Ottoman sphere of influence;
3. from 1699 to 1867, in the Habsburg Monarchy and thus in Austria;
4. 1848-1849, in revolutionary Hungary, from 1867 to 1918 in Transleithania, the Hungarian part of the Habsburg Dual Monarchy;
5. in Romania since 1918;
6. since the end of the 19<sup>th</sup> century, many Transylvanian Saxons emigrated to America (USA and Canada). Since the Second World War, more and more Transylvanian Saxons have moved to the Federal Republic of Germany, acquiring German citizenship and becoming Germans in the national sense;
7. today, the vast majority have German citizenship, less than 10 per cent have Romanian citizenship and a small proportion have Austrian, Swiss, US or Canadian



**Johann Lauer.** E-Mail: [johann@lauer.biz](mailto:johann@lauer.biz). Homepage: [lauer.biz](http://lauer.biz).

Generative Artificial Intelligence and Transylvanian-Saxon Cultural Heritage.  
Opportunities and threats for acquisition, preservation and further development.

**Quelle:** [siebenbuergensachsen.de/generative-ai-saxon.pdf](http://siebenbuergensachsen.de/generative-ai-saxon.pdf).

citizenship. There are Transylvanian Saxon associations in these countries. A few have other nationalities, and some hold several citizenships.

The physical existence of the Transylvanian Saxon community was repeatedly threatened by Mongol and Ottoman raids over the centuries. As described above, these threats were met with improved defenses. Unlike Western Europe, where the Thirty Years' War raged (1618-1648), there were no religious wars in Transylvania. As early as 1557, on the initiative of the Saxon National University, the Transylvanian Diet in Thorenburg declared its commitment to religious tolerance, which lasted for centuries. However, the decline of the Ottoman Empire did not eliminate the dangers to the community; the Transylvanian Saxons subsequently had to deal with other existential threats. These began at the end of the 18<sup>th</sup> century and led to major upheavals in the 19<sup>th</sup> and 20<sup>th</sup> centuries due to national conflicts.

### **Nationalism and chauvinism: tragic causes of emigration**

The “invention of the nation” (Benedict Anderson) and the emergence of nation-states, as well as the accompanying “social mobilization” (Karl W. Deutsch), brought forth both positive and negative developments. On the one hand, hitherto unknown forms of solidarity within the nation were established; on the other hand, brutality and hatred towards other nationalities emerged. The positive results include the overcoming of the agrarian society and the establishment of the industrial world, which made possible the following significant advances: the emergence of national cultures and cultural diversity, the establishment of representative democracy, the rule of law, the creation of prosperity and social security systems that virtually presuppose national solidarity.

*National movements* have been calling for the creation of nation-states since the 19<sup>th</sup> century. Along with religion and race, nationality is another instrument used to exploit differences between people and to legitimize power and domination. The creation of nationally homogeneous states in multi-ethnic areas inevitably led to conflicts and cultural clashes. The conflation of national and territorial issues has led to negative developments, particularly in the brutality of armed conflicts. National chauvinism is a historical phenomenon that reached its most terrible excesses in the 20<sup>th</sup> century.



**Johann Lauer.** E-Mail: [johann@lauer.biz](mailto:johann@lauer.biz). Homepage: [lauer.biz](http://lauer.biz).

Generative Artificial Intelligence and Transylvanian-Saxon Cultural Heritage.  
Opportunities and threats for acquisition, preservation and further development.

**Quelle:** [siebenbuergensachsen.de/generative-ai-saxon.pdf](http://siebenbuergensachsen.de/generative-ai-saxon.pdf).

These include, in particular, “demographic warfare” (Dan Diner) or ethnic cleansing in the form of *genocide* and *expulsion*. The *de facto* expatriation and expulsion of the German population from Eastern and South-Eastern Europe can be seen as a result of the national chauvinism of the 19<sup>th</sup> and especially the 20<sup>th</sup> century. The process took place in several stages. In the following, this development is illustrated by the example of the Transylvanian Saxons.

The *first phase* is characterized by a variety of nationally induced disadvantages. The starting point was the Josephine reform movement at the end of the 18<sup>th</sup> century. The announcement that German would be used as the official language instead of Latin led to resistance, especially among the Magyars. The Age of Nationalism thus spread through the Habsburg Monarchy as an unintended consequence. The Josephine Reforms, implemented by Emperor Joseph II (1765-1790) in the spirit of enlightened absolutism, triggered a discussion among the Transylvanian Saxons about a *Finis Saxoniae*. The danger of dissolution of the community was discussed, as the rights of the Transylvanian Saxons were severely curtailed by the Rescriptum of concivility (Konzivilitätsreskript, 1781) and the abolition of the veto right (*Kuriatvotum*, 1792). According to the Rescriptum of concivility, members of other nations could also acquire land in the royal domain; since the 12<sup>th</sup> century, this right had generally been reserved exclusively to Transylvanian Saxons. In the princely era, the veto right meant that each estate nation from Transylvania – the Hungarian nobility, the Szeklers and the Transylvanian Saxons – had one vote in the Transylvanian Diet, without which no law could be passed. As a result of the new per capita voting system, the Saxons were now hopelessly in the minority (about 10 per cent). Joseph II reversed most of his reforms on his deathbed, but his successor Leopold II restored the Saxon National University, which existed until 1876, when the centuries-old autonomy of the Transylvanian Saxons was abolished.

In the period that followed, the Transylvanian Saxons were confronted with cultural struggles in the form of attempts at Magyarization and, from 1918, at Romanianization. These were mainly averted by the fact that the German schools of the Transylvanian



**Johann Lauer.** E-Mail: [johann@lauer.biz](mailto:johann@lauer.biz). Homepage: [lauer.biz](http://lauer.biz).

Generative Artificial Intelligence and Transylvanian-Saxon Cultural Heritage.  
Opportunities and threats for acquisition, preservation and further development.

**Quelle:** [siebenbuergensachsen.de/generative-ai-saxon.pdf](http://siebenbuergensachsen.de/generative-ai-saxon.pdf).

Saxons were run as denominational schools under the auspices of the Evangelical Church A.B. until after the Second World War.

In the *second phase*, the Third Reich concluded a large number of bilateral treaties with eastern and south-eastern European states, which resulted in the resettlement ("*Heim-ins-Reich-Aktion*") of Germans from the Baltic States, the Soviet Union, Romania, Hungary, Croatia, Bulgaria and, in some cases, from the Italian South Tyrol to Germany. The Transylvanian Saxons were not affected by these resettlement campaigns. On the basis of treaties signed in 1943 between the Third Reich and Hungary and Romania, German men fit for military service were conscripted into the German military, the Wehrmacht and, above all, into the Waffen-SS. These treaties show how far the de facto naturalization of Germans in Eastern and South-Eastern Europe had already progressed. The German Reich naturally saw itself as responsible for millions of Germans of other citizenship. Although the Transylvanian Saxons had considered themselves German for centuries, Transylvania had never belonged to Germany, and the Transylvanian Saxons were at the time partly Romanian and partly Hungarian citizens. To this day, these events have hindered the peaceful and normal coexistence of Germans with other peoples in Eastern and South-Eastern Europe.

The *third phase* of de facto resettlement and expulsion began with the Second World War and led to flight, deportation, expropriation, expulsion and forced resettlement. The Transylvanian Saxons in the main settlement areas of south Transylvania (Altland and Burzenland) were not affected by flight and expulsion, as Romania was the only Eastern European country not to carry out German expulsions. Only from Northern Transylvania (Nösnerland), which belonged to Hungary from 1940 to 1944, did the Transylvanian Saxons flee westwards in several treks. Those who remained in Romania were deported to labor camps in the Soviet Union. The German settler groups in East-Central Europe were punished for the war damage and crimes committed by Hitler's Germany (and subject to a kind of national "kin liability") even though, living as they did outside the German Reich, they could not have been involved in the establishment of the Nazi regime. On 6 January 1945, 30,336 Transylvanian Saxons (15% of the population) were deported to the Soviet Union, all men between the ages



**Johann Lauer.** E-Mail: [johann@lauer.biz](mailto:johann@lauer.biz). Homepage: [lauer.biz](http://lauer.biz).

Generative Artificial Intelligence and Transylvanian-Saxon Cultural Heritage.  
Opportunities and threats for acquisition, preservation and further development.

**Quelle:** [siebenbuergensachsen.de/generative-ai-saxon.pdf](http://siebenbuergensachsen.de/generative-ai-saxon.pdf).

of 17 and 45 who were not already prisoners of war, and women between the ages of 18 and 35. The last of them returned from deportation in 1949, while 3,076 people (12%) died in the Soviet Union (Georg Weber et al.).

The *fourth phase* of this development began in 1949 and lasted until the end of the 20<sup>th</sup> century. Nationalism, which communism promoted despite its claims to the contrary, celebrated its resurrection in new clothing. This period is characterized by a variety of disadvantages for those left behind and led to the resettlement of people from the countries of Eastern and South-Eastern Europe. The year 1949 is considered to mark the end of the actual flight and expulsion caused by the war. After the end of the Second World War, it was mainly former soldiers and refugees from northern Transylvania who came to Germany, as well as exhausted deportees who were released in the Soviet occupation zone. In the 1950s, around 350 German people left Romania each year; the number increased in the 1960s and rose again after the agreement between Helmut Schmidt and Nicolae Ceausescu in 1978. In 1990 there were 111,150, in 1991 32,178, in 1992 16,146, and thereafter about 6,000 per year, of which about 50 per cent were Transylvanian Saxons (Ernst Wagner).

### **Von einer festen Burg zu einem offenen Club**

The above-mentioned Transylvanian Saxon structures really experienced a radical change after the Second World War. The most significant consequence was the *dissolution* of the Transylvanian Saxons' *shared geographic space*. Less than 10 percent still lived in Transylvania at the turn of the millennium. The religious bond has also lost its formative significance. The religious ties to the Evangelical Church A.B. that undoubtedly existed before the Second World War are now only present in a minority of individuals.

The migration movements of the 20<sup>th</sup> century also resulted in a shift in the significance of language as a unifying force within the community. The number of speakers of the dialect is declining, and even the ability to understand the dialect has been lost in some cases. The Transylvanian Saxons, a group that has resided in the USA and Canada since the late 19<sup>th</sup> century, utilize English as their primary language and possess only



**Johann Lauer.** E-Mail: [johann@lauer.biz](mailto:johann@lauer.biz). Homepage: [lauer.biz](http://lauer.biz).

Generative Artificial Intelligence and Transylvanian-Saxon Cultural Heritage.  
Opportunities and threats for acquisition, preservation and further development.

**Quelle:** [siebenbuergensachsen.de/generative-ai-saxon.pdf](http://siebenbuergensachsen.de/generative-ai-saxon.pdf).

a rudimentary comprehension of German and a negligible understanding of the Transylvanian Saxon dialect. In German schools in Romania, over 90 percent of the pupils are of a different nationality, typically Romanian. It is notable that a considerable number of these pupils evince a keen interest in the Transylvanian Saxon cultural heritage and are willing to learn and develop it further. In order to provide those who are enthusiastic about and would like to participate in the appropriation, preservation and further development of the Transylvanian Saxon cultural heritage with the opportunity to gain further insight, this article was published not only in German, but also in English and Romanian.

The Transylvanian Saxon neighborhood and association system has been partially saved, rebuilt or newly established not only in Romania, but above all in Germany, as well as in the USA, Canada, Austria and Switzerland. The majority of Transylvanian Saxon towns have a hometown community (HOG, *Heimatortsgemeinschaft*), which serves to maintain connections between former residents worldwide. Additionally, these communities play a pivotal role in preserving fortified churches in Transylvania. A considerable number of the associations that were established during the nineteenth century continue to operate with great efficacy in the present day. The Transylvanian Saxon *cultural heritage* represents the sole remaining *point of connection* and shared identity among Transylvanian Saxons across the globe, and it is this heritage that the existing associations are committed to preserving and promoting. Since the conclusion of the 20<sup>th</sup> century, the Transylvanian Saxon community has ceased to function as a *fortified castle* and has instead become an *open club*, welcoming individuals with an interest in the Transylvanian Saxon cultural heritage. The absence of a shared settlement area has resulted in the Transylvanian Saxon community being held together by *common interests*, thereby rendering it more comparable to an *open club*. Membership is open to all those with an interest in the Transylvanian Saxon heritage or who are members of one of the numerous associations.

### **Logos and coats of arms of the Transylvanian Saxons**

The coat of arms of the Transylvanian Saxons shows seven castles, which, according to legend, are meant to remind us on the one hand of the name “*Siebenbürgen*”, which



**Johann Lauer.** E-Mail: [johann@lauer.biz](mailto:johann@lauer.biz). Homepage: [lauer.biz](http://lauer.biz).

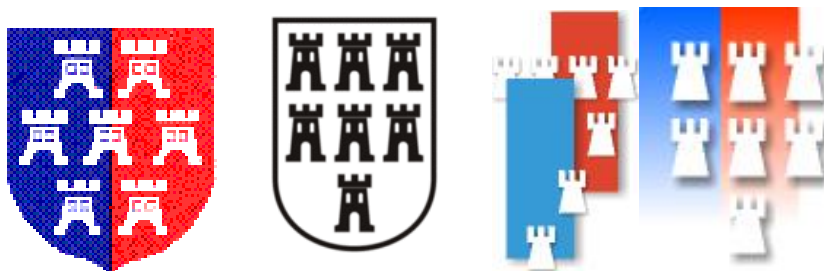
Generative Artificial Intelligence and Transylvanian-Saxon Cultural Heritage.

Opportunities and threats for acquisition, preservation and further development.

**Quelle:** [siebenbuergensachsen.de/generative-ai-saxon.pdf](http://siebenbuergensachsen.de/generative-ai-saxon.pdf).

means “seven castles” and is the German name for Transylvania, and on the other hand of the seven seats. However, there were not just seven castles in Transylvania, but over 200. About 190 fortified churches or their remains can still be seen today. The original structure of administration included *eight seats*, namely the main seat in Hermannstadt (Sibiu) and the seven secondary seats (Schäßburg/Sighișoara, Mühlbach/Sebeș, Großschenk/Cincu, Reussmarkt/Miercurea Sibiului, Reps/Rupea, Leschkirch/Nocrich, Broos/Orăștie). All eight seats also functioned as administrative units of the Saxon National University. The path of the vast majority of Transylvanian Saxons led from their settlement area in Transylvania out into the wide world. Today, Transylvanian Saxons live in various countries such as Germany, Romania, Austria, Switzerland, the USA and Canada. Small numbers also live in many other countries. It can therefore be stated that the seven castles in the logos and coats of arms still have their justification. The six castles, each representing one of the above-mentioned countries, and the seventh castle, which symbolizes the rest of the world, form an ensemble which, as a whole, reflects the present settlement area of the Transylvanian Saxons.

Robert Linz (1957 to 2014) designed at my request a series of logos for Transylvanian Saxon clubs, which can be used by all groups or associations. Further examples of his work, along with information and literature about logos and coats of arms, can be found in my article: Logos and coats of arms. Further development of the Transylvanian Saxon corporate design ([Logos und Wappen. Weiterentwicklung des siebenbürgisch-sächsischen Corporate Designs](#)).



**Johann Lauer.** E-Mail: [johann@lauer.biz](mailto:johann@lauer.biz). Homepage: [lauer.biz](http://lauer.biz).

Generative Artificial Intelligence and Transylvanian-Saxon Cultural Heritage.

Opportunities and threats for acquisition, preservation and further development.

**Quelle:** [siebenbuergensachsen.de/generative-ai-saxon.pdf](http://siebenbuergensachsen.de/generative-ai-saxon.pdf).



With regard to the *communication design* (corporate design) of the Transylvanian Saxon institutions, two elements should be taken into account. The first is the colors of the Transylvanian Saxon flag: *blue* and *red*. The second element, for the reasons mentioned above, is the seven castles. My recommendation is therefore as follows: every informal club or association that feels committed to the Transylvanian Saxon cultural heritage should use a logo that contains these two basic elements. Logos are modern optical signals that provide orientation in the flood of information. The logo has (partially) taken over the functions of the coat of arms and serves as a recognition symbol and orientation aid: quickly recognizable, clearly identifiable. In contrast to the coat of arms, which was initially an individual symbol, the logo is usually not an individual or concrete recognition symbol, but an *abstract symbol*. Certainly, some coats of arms have also evolved from an individual to an abstract symbol, such as the Transylvanian Saxon coats of arms, which in their black and white versions cannot be clearly associated with any Transylvanian Saxon institution.

### **From a shared geographic space in Transylvania to the new bond, to a shared communication space on the Internet**

The Transylvanian Saxons finally lost their shared settlement area, one of several walls that were lost over the course of history, in the 20<sup>th</sup> century. The commonalities caused by geography are now a thing of the past since the resettlement during the communist era and the mass exodus. However, there are still common interests for the Transylvanian Saxons scattered around the world.

The Transylvanian Saxons are now dispersed throughout the globe, with the majority residing in Germany and the majority of Transylvanian Saxon institutions located there as well. Additionally, there are numerous active institutions in Transylvania/Romania, Austria, Switzerland, the USA and Canada. Consequently, the Transylvanian Saxons have a future not only in Transylvania, but in all countries where there are Transylvanian Saxon institutions and individuals interested in maintaining *and* developing the often-cited “invisible baggage”, the Transylvanian Saxon cultural heritage.



**Johann Lauer.** E-Mail: [johann@lauer.biz](mailto:johann@lauer.biz). Homepage: [lauer.biz](http://lauer.biz).

Generative Artificial Intelligence and Transylvanian-Saxon Cultural Heritage.  
Opportunities and threats for acquisition, preservation and further development.

**Quelle:** [siebenbuergensachsen.de/generative-ai-saxon.pdf](http://siebenbuergensachsen.de/generative-ai-saxon.pdf).

By the end of the 20<sup>th</sup> century, the overwhelming majority of Transylvanian Saxons were convinced that they were witnessing the end of more than 850 years of the Transylvanian Saxon community's history, culture, and identity. Some believed that the future of the Transylvanian Saxons would be best served by remaining in Transylvania. Given the relatively low number of returnees, this option was inherently unsustainable.

Following the dissolution of the shared living space in Transylvania, the Transylvanian Saxons established a common communication space on the Internet, thereby forging a new bond. The advent of the Internet at the end of the 20<sup>th</sup> century saw the emergence of new avenues for communication and publication. Following 1995, these opportunities were initially utilized by individuals, before being subsequently embraced by Transylvanian Saxon associations.

## **Internet as a digital communication space or a new bond for the Transylvanian Saxons**

The advent of the Internet at the end of the 20<sup>th</sup> century has enabled the creation of communication and publication spaces that are independent of both space and time. It is not feasible for digital communication spaces on the Internet to entirely supplant genuine conversations in physical locations and at specific times. However, they are an effective means of maintaining contact with one another. The same can be said of digital publication options; they cannot replace analogue ones, but rather serve to complement them. Nevertheless, the Internet was particularly suited to the needs of the Transylvanian Saxon community, which had lost its common living space in Transylvania during this period. The Internet can serve as a second pillar, alongside the associations, to ensure the preservation of the Transylvanian Saxon cultural heritage. From October 1995 to May 2003, I engaged in various voluntary roles within the Association of Transylvanian Saxons in Germany and other Transylvanian Saxon organizations, advocating for the utilization of the Internet. These roles included cultural and press spokesman, and deputy regional chairman. In lectures and personal discussions, I highlighted the prospective significance of the Internet. The principal



**Johann Lauer.** E-Mail: [johann@lauer.biz](mailto:johann@lauer.biz). Homepage: [lauer.biz](http://lauer.biz).

Generative Artificial Intelligence and Transylvanian-Saxon Cultural Heritage.  
Opportunities and threats for acquisition, preservation and further development.

**Quelle:** [siebenbuergensachsen.de/generative-ai-saxon.pdf](http://siebenbuergensachsen.de/generative-ai-saxon.pdf).

arguments are presented in this article published in 1999: Shared communication spaces on the Internet ([Gemeinsame Kommunikationsräume im Internet](#)).

### **Internet resources of the Transylvanian Saxons**

The following provides a brief, paradigmatic overview of the origins and current status of the Internet structures that the Transylvanian Saxons and their institutions have built up over the past three decades to enable digital communication and digital publishing.

The process of digitization has been gathering pace since the 1950s, with the construction of an increasing number of digital knowledge databases. It is also noteworthy that, at approximately the same time, tools were developed that enabled the exchange of digital data on a global scale. Notable instances of this phenomenon include the transmission of the inaugural electronic mail message (1971) and the advent of the Internet Protocol (1974). In 1989, Tim Berners-Lee developed the World Wide Web (WWW) at CERN in Switzerland, and in 1990, he created the first Web browser. As a consequence of these and numerous other technical innovations, the Internet was established in its current form and has been used by the majority of people for over three decades. The Internet has facilitated digital communication and digital publication, resulting in a notable expansion of digital information. A straightforward reference system (hyperlinks) provides users with convenient access to all digital publications. The prevalence of digital communication and publication on the Internet has increased concurrently with that of analogue media.

In 1990, I first became acquainted with the concept of knowledge databases, particularly those maintained by the European Commission. While preparing my book on the European Communities (Corporate governance in the EC. Practical assistance for internal market-oriented corporate governance ([Unternehmensführung in der EG. Praktische Hilfen für eine binnenmarktorientierte Unternehmensführung](#))) it became evident that a comprehensive discourse on market-oriented management could not be undertaken without the inclusion of digital knowledge databases. Consequently, the third part of the book addresses the issue of information gathering in the EC internal market, encompassing both analogue and digital information sources. In light of these



**Johann Lauer.** E-Mail: [johann@lauer.biz](mailto:johann@lauer.biz). Homepage: [lauer.biz](http://lauer.biz).

Generative Artificial Intelligence and Transylvanian-Saxon Cultural Heritage.  
Opportunities and threats for acquisition, preservation and further development.

**Quelle:** [siebenbuergensachsen.de/generative-ai-saxon.pdf](http://siebenbuergensachsen.de/generative-ai-saxon.pdf).

experiences, from 1994 onwards I also commenced professional work on the communication and publishing possibilities of the Internet. This included conducting courses for various education organizations on the professional and private use of the Internet, Internet research, HTML and Web publishing.

I attended introductory HTML courses at the University of Heidelberg's computer center, which gave me space for my first attempts at using the Internet. In March 1995, I published the first information about the Transylvanian Saxons on the Internet. It was a few pictures and some information about my home village of [Reußen](#). All of my articles and projects about the Transylvanian Saxons can be found here: [siebenbuergersachsen.de](#). Jochen Philippi says that he hosted the Transylvanian Web Server (SWS) at the University of Munich's computer center in late 1995 or early 1996. Initially, this included an article about the history of the Transylvanian Saxons, then a ride-sharing service. In 1998, he programmed the Transylvanian Webring, which made it easy to navigate from one site about Transylvania to the next. In January 1998, Hans-Detlev Buchner opened the Web pages "Rokestuf", which subsequently developed into the most frequently used communication platform for Transylvanian Saxons on the Internet.

By the turn of the millennium, many more Web pages had been created that provided information about Transylvania or the Transylvanian Saxons on the Internet and offered opportunities for communication. The most comprehensive project was created in 1999 on the occasion of the celebrations for the 50<sup>th</sup> anniversary of the Baden-Württemberg regional group [Siebenbürger Sachsen in Baden-Württemberg](#) (Transylvanian Saxons in Baden-Württemberg). The project comprised three elements: a book, an online presence and a CD-ROM. I was tasked with the conception and coordination of the project. In collaboration with Robert Sonnleitner, I created the Internet presence, while Robert Sonnleitner and Bernd Schörwerth were responsible for the CD-ROM. I was tasked with the coordination of the book production process. In total, the project involved the participation of over 70 individuals, either directly or indirectly.



**Johann Lauer.** E-Mail: [johann@lauer.biz](mailto:johann@lauer.biz). Homepage: [lauer.biz](#).

Generative Artificial Intelligence and Transylvanian-Saxon Cultural Heritage.  
Opportunities and threats for acquisition, preservation and further development.

**Quelle:** [siebenbuergersachsen.de/generative-ai-saxon.pdf](#).

Today the number of online offerings is almost unmanageable. The most comprehensive is managed by Robert Sonnleitner and his webmaster team, which also includes Günther Melzer, Gunther Krauss and Hans-Detlev Buchner. [Siebenbuenger.de](http://Siebenbuenger.de) has been published by the Association of Transylvanian Saxons in Germany since 2000 and is its homepage. Robert Sonnleitner has been the association's Internet representative since November 1999 and coordinates digital communication, digital publication and Internet training for multipliers.

*Digital communication:* In the period before the turn of the century, as mentioned above, Rokestuf functioned as the most frequented common communication space of the Transylvanian Saxons. In the 2000s, the forum on the website [siebenbuenger.de/treffpunkt/](http://siebenbuenger.de/treffpunkt/) took over this role. Since the establishment of Web 2.0, communication has primarily taken place via the social media Facebook, YouTube, WhatsApp, Instagram and TikTok. The Corona period led to a significant increase in digital communication. Many meetings of the Transylvanian Saxon associations could only be held digitally. In 2020, the Saxon meeting was held exclusively in digital form for the first time; see the article: A homeland day between screens, homeland day 2020 ([Ein Heimattag zwischen Bildschirmen: Digitaler Heimattag 2020](#)). Since then, meetings of the committees have sometimes been held in hybrid form, with people who cannot be there in person attending via the Internet. Since 2021, most of the events at the Saxon meeting in Dinkelsbühl in Germany have also been broadcast live over the Internet. These are coordinated by Hermann Depner. Viewers around the world have the opportunity to follow the events, and even to participate, for example by asking questions during the panel discussion on Mondays: [Heimattag live für daheim](#), homeland day live for home.

*Digital publication:* When one asks Microsoft's co-pilot for example about the Transylvanian Saxons, [siebenbuenger.de](http://siebenbuenger.de) is almost always stated as the source of the information. This is because this homepage has been posting new information on the Internet every day for more than two decades. The editorial team of the Transylvanian Newspaper (*Siebenbürgische Zeitung*), namely Siegbert Bruss (editor-in-chief) and Christian Schoger (as deputy editor-in-chief), guarantees compliance with journalistic



**Johann Lauer.** E-Mail: [johann@lauer.biz](mailto:johann@lauer.biz). Homepage: [lauer.biz](http://lauer.biz).

Generative Artificial Intelligence and Transylvanian-Saxon Cultural Heritage.  
Opportunities and threats for acquisition, preservation and further development.

**Quelle:** [siebenbuergensachsen.de/generative-ai-saxon.pdf](http://siebenbuergensachsen.de/generative-ai-saxon.pdf).

standards. For years, three articles have been published every day, with other information often added. Furthermore, the Transylvanian Newspaper archive was digitized in 2010: [18315 Seiten Geschichte: Das Archiv der Siebenbürgischen Zeitung ist online](#) (18315 pages of history: The archive of the Transylvanian Newspaper is online).

*Internet seminars:* Once a year, an internet seminar for multipliers takes place in Bad Kissingen, during which the latest developments and tools for the Internet are presented. In December 2023, the 15<sup>th</sup> Internet seminar was held, during which generative AI was presented: [Werkzeuge der Zukunft: Internetseminar über „Künstliche Intelligenz“ in Bad Kissingen](#) (Tools of the future: Internet seminar on “Artificial Intelligence” in Bad Kissingen). In this context, it should also be noted that the webmasters are also directly or indirectly involved in numerous other homepages of Transylvanian Saxon associations.

### **Deficits: lack of digitization and of online concepts in most Transylvanian Saxon associations**

Although the offers presented above have some excellent approaches and results, the complete digitization of the cultural heritage of the Transylvanian Saxons is proving to be a considerable challenge. This is due to the fact that most associations, if they have tackled this task at all, have so far only inadequately managed it. With regard to the implementation of a professional Internet strategy, it can be stated that the Association of Transylvanian Saxons in Germany is the only association of Transylvanian Saxons to have had such a strategy for over two decades; it also implements it in an exemplary manner.

Other Transylvanian Saxon associations have also carried out notable digitization projects. These include, for example, the digital cataloging of the Gundelsheim Library in Germany ([Unser Service in Bibliothek und Archiv](#), our service in library and archive), which is now connected to the Internet, and the online availability of the document collection [Urkundenbuch zur Geschichte der Deutschen in Siebenbürgen](#) (Book of documents on the history of the Germans in Transylvania). An appropriate digital



**Johann Lauer.** E-Mail: [johann@lauer.biz](mailto:johann@lauer.biz). Homepage: [lauer.biz](http://lauer.biz).

Generative Artificial Intelligence and Transylvanian-Saxon Cultural Heritage.  
Opportunities and threats for acquisition, preservation and further development.

**Quelle:** [siebenbuergensachsen.de/generative-ai-saxon.pdf](http://siebenbuergensachsen.de/generative-ai-saxon.pdf).

infrastructure is required for systematic and comprehensive digital cataloging and public digital publication of all physical artifacts and all written documents. In this regard, the digitization of all 95,000 bibliographic units of the Transylvanian Library is required.

After publication, the work is indexed by search engines and large language models (LLMs), making it accessible to everyone worldwide. Only through these measures can the cultural heritage of the Transylvanian Saxons remain present and accessible to everyone in the future. The quality of the answers that a generative AI can provide depends on both the quantity and the quality of the information available.

**Tasks: Digitization and concepts for the appropriation, preservation and further development of the cultural heritage of the Transylvanian Saxon community**

Finally, I would like to point out two particularly challenging future tasks, which I consider crucial for the appropriation, preservation and further development of the Transylvanian Saxon cultural heritage in the age of generative AI. Both challenges have an intellectual-conceptual as well as a technical aspect.

The answers given by generative AI can be influenced *indirectly*. This can be done in two ways: first, by *digitizing* and *publishing* the cultural heritage as completely as possible, and second, by using generative AI. Both measures result in indirect *training* of the generative AI. In order for this indirect influence to be as successful as possible, the theoretical limits and possibilities as well as the practical opportunities and risks of generative AI should be fully understood.

The *digitization of the cultural heritage* is the first major challenge for the Transylvanian Saxons. This requires both a comprehensive digital cataloging of all cultural artifacts and a digital *publication* of all written documents. Once published, these will be indexed by search engines and large language models (LLMs), making them available to anyone in the world. Only in this way can the cultural heritage of the Transylvanian Saxons remain present and accessible to everyone in the future.

Today, whether we like it or not, *machines* are also involved in further developing cultural heritage. Concepts are therefore needed that allow for its appropriation,



**Johann Lauer.** E-Mail: [johann@lauer.biz](mailto:johann@lauer.biz). Homepage: [lauer.biz](http://lauer.biz).

Generative Artificial Intelligence and Transylvanian-Saxon Cultural Heritage.  
Opportunities and threats for acquisition, preservation and further development.

**Quelle:** [siebenbuergensachsen.de/generative-ai-saxon.pdf](http://siebenbuergensachsen.de/generative-ai-saxon.pdf).

preservation and further development in the interests of the Transylvanian Saxon community. Specifically, this is a matter of developing axiological (ethical, political, social, etc.) and epistemological values that can be used both to evaluate the results of the large language models and to enable a lively cultural development. If these two tasks are successfully accomplished, the Transylvanian Saxon cultural heritage will continue to exist in the future, holding the community together and shaping the identity of Transylvanian Saxons, regardless of where they live.

## **Conclusion: Internet and generative AI as a digital communication space for the Transylvanian Saxons**

In my opinion, since the end of the 20<sup>th</sup> century the Transylvanian Saxon cultural heritage has become almost the only remaining *bond of sympathy* that holds the Transylvanian Saxon community together and shapes the Transylvanian Saxon identity. My *second thesis* is that the *Internet*, thanks to generative AI, will in the future be a very powerful *digital communication* space for the appropriation, preservation and development of the Transylvanian Saxon cultural heritage. *Associations* and the *Internet* are, according to my *third thesis*, the most important *instruments* of the community. Finally, both the prerequisites mentioned above and my proposals for the creation of digital concepts are summarized in the form of theses

### **Generative artificial intelligence: opportunities and threats**

Generative AI is a powerful tool that *can* usually provide high-quality answers to human requests, questions and hints, called prompts. It calculates the statistically most likely word combinations for the input given in the prompt.

The digitized and publicly accessible Transylvanian Saxon cultural heritage has already become the subject of generative AI applications. The algorithms ensure that the questions can be answered by machines. *Training* with epistemic values aims to promote the generation of true answers and prevent false ones. Training with axiological values (ethical, political, social, etc.) should promote civilized debate and prevent offensive and destructive communication.



**Johann Lauer.** E-Mail: [johann@lauer.biz](mailto:johann@lauer.biz). Homepage: [lauer.biz](http://lauer.biz).

Generative Artificial Intelligence and Transylvanian-Saxon Cultural Heritage.

Opportunities and threats for acquisition, preservation and further development.

**Quelle:** [siebenbuergensachsen.de/generative-ai-saxon.pdf](http://siebenbuergensachsen.de/generative-ai-saxon.pdf).



In theory, huge amounts of data can be stored and processed. Billions of queries can be processed simultaneously. The *theoretical limits* are generative AI's *narrow intelligence* – it cannot understand text. The quantitative methodology of generative AI allows correct *syntax*, but *not semantics*; hence its nickname, *stochastic parrot*. A comparison with human intelligence shows what is still missing for an AI robot to become an acting artificial expert that can solve problems like a human: *perception*, *consciousness*, *self-awareness* and *self-knowledge*. *Superintelligence* was, and for the time being remains, *science fiction*. Secondly, generative AI lacks the means to ensure the *transparency* and *reliability* of the answers.

*Practical opportunities* include the fact that generative AI can generate new texts, summarize large amounts of text, improve texts grammatically and stylistically, and translate them into different languages. Generative AI can be compared to a *digital librarian* who, like a search engine, can provide information about all the texts available to him. In addition, the large language models (LLMs) can also be used to generate software codes, and these language models are applicable not only to texts, but also to audios, images, and videos.

The most serious *practical threats* are the almost inexhaustible possibilities of *disinformation*, which blur the distinction between *fact* and *fiction*, and *uncritical technosolutionism*, characterized by blind trust in technology.

### **Transylvanian Saxons: from a fortress to an open club, or from the seven seats to the seven countries**

As part of the settlement of Eastern Europe, settlers from Western Europe migrated to Transylvania from the 12<sup>th</sup> century onwards. There they founded the Transylvanian Saxon community. For centuries, the Transylvanian Saxons' *fortified churches* ensured their physical survival in the face of Mongol (13<sup>th</sup> century) and Ottoman (14<sup>th</sup> to 18<sup>th</sup> centuries) raids.

Over time, in addition to the physical castle defensive walls, other spiritual walls or *identity-forming institutions* were established, which strengthened cohesion and guaranteed the survival and preservation of the cultural independence of the



**Johann Lauer.** E-Mail: [johann@lauer.biz](mailto:johann@lauer.biz). Homepage: [lauer.biz](http://lauer.biz).

Generative Artificial Intelligence and Transylvanian-Saxon Cultural Heritage.  
Opportunities and threats for acquisition, preservation and further development.

**Quelle:** [siebenbuergensachsen.de/generative-ai-saxon.pdf](http://siebenbuergensachsen.de/generative-ai-saxon.pdf).

Transylvanian Saxons in Transylvania until the end of the 20<sup>th</sup> century. These included the Saxon National University, the Church, the German language and a strong sense of community and association.

The *Saxon National University (universitas saxonum)* was founded in 1486 on the basis of the *Andreanum*. It functioned as a common administrative, judicial, and political authority. In addition, there was the *religious bond*, which became even stronger after the Reformation due to religious differentiation. The Transylvanian Saxons were also *linguistically* distinct from all the other inhabitants of the country. In private life, the *Transylvanian Saxon dialect* was spoken, while in church, school and administration, since the Reformation, *modern or standard German* was used.

These *mental and physical defensive walls or identity-forming institutions* formed the Transylvanian Saxon *fortress* within which the Transylvanian Saxon community lived and developed from the 12<sup>th</sup> century until the end of the 20<sup>th</sup> century.

The above-mentioned Transylvanian Saxon structures underwent a radical change only after the Second World War, with the exception of the Saxon National University, which lost its rights in 1876. Upon the conclusion of these developments, the Transylvanian Saxon community had undergone radical change. The most drastic result was that the Transylvanian Saxons lost their common settlement area. At the turn of the millennium, less than ten per cent of them still lived in Transylvania, now Romania.

The *coat of arms* of the Transylvanian Saxons shows *seven castles*, which, according to legend, are intended on the one hand to remind us of the German name for Transylvania, *Siebenbürgen*, which means seven castles, and on the other hand of the seven seats (actually eight, one main seat and seven secondary seats). The path of the Transylvanian Saxons begins in Transylvania and takes them all over the world. Today they live mainly in six countries: Germany, Romania, Austria, Switzerland, USA and Canada. A small number of them also live in a number of other countries. This makes it clear that the seven castles in the logos or coats of arms still have their justification.



**Johann Lauer.** E-Mail: [johann@lauer.biz](mailto:johann@lauer.biz). Homepage: [lauer.biz](http://lauer.biz).

Generative Artificial Intelligence and Transylvanian-Saxon Cultural Heritage.

Opportunities and threats for acquisition, preservation and further development.

**Quelle:** [siebenbuergensachsen.de/generative-ai-saxon.pdf](http://siebenbuergensachsen.de/generative-ai-saxon.pdf).

The *religious bond* has also lost its formative significance. The migration movements of the 20<sup>th</sup> century led to a change in the importance of *language* as a unifying bond within the Transylvanian Saxon community. The dialect is spoken by fewer and fewer descendants, and in some cases even the understanding of the dialect has been lost. The Transylvanian Saxons of the USA and Canada, some of whom have been living there since the end of the 19<sup>th</sup> century, use English as their first language and have only a rudimentary understanding of German, and very few of them understand the Transylvanian Saxon dialect. In German schools in Romania, over 90 per cent of the pupils have parents of another nationality, usually Romanian. A significant proportion of these pupils show a keen interest in the Transylvanian Saxon cultural heritage and are willing to learn about and develop it. For this reason, this article is published not only in German, but also in English and Romanian.

The Transylvanian Saxon neighborhood and association system was partially saved, rebuilt or re-established not only in Romania, but especially in the new settlement countries. Since the end of the 20<sup>th</sup> century, the Transylvanian Saxon community is *no longer a fortress or fortified castle*, but an *open club* which anyone interested in the Transylvanian Saxon cultural heritage can join and participate in.

### **Internet as a communication space or a new bond for the Transylvanian Saxons**

The Internet emerged at the same time as the settlement area in Transylvania was lost and many countries around the world became new homes. The Transylvanian Saxons have been using the Internet for almost 30 years.

In March 1995, I published the first information about the Transylvanian Saxons on the Internet. It included a few pictures and some information about my home village of [Reußen](#). Jochen Philippi hosted the Transylvanian Web server at the end of 1995. By the turn of the millennium, many more homepages had been created to provide information about Transylvania or the Transylvanian Saxons online and that offered opportunities for communication. The most comprehensive project was created in 1999: Transylvanian Saxons in Baden-Württemberg ([Siebenbürger Sachsen in Baden-Württemberg](#)). The tri-media project included a book, an Internet presence and a CD-



**Johann Lauer.** E-Mail: [johann@lauer.biz](mailto:johann@lauer.biz). Homepage: [lauer.biz](http://lauer.biz).

Generative Artificial Intelligence and Transylvanian-Saxon Cultural Heritage.

Opportunities and threats for acquisition, preservation and further development.

**Quelle:** [siebenbuergensachsen.de/generative-ai-saxon.pdf](http://siebenbuergensachsen.de/generative-ai-saxon.pdf).

ROM. I was responsible for the conception and coordination of the project. The Internet presence was created in collaboration with Robert Sonnleitner, who was also responsible for the CD-ROM together with Bernd Schörwerth. I was responsible for coordinating the book production. In total, more than 70 people were directly or indirectly involved in the realization of the project.

At the moment there is an almost unmanageable number of offers. The most comprehensive site is maintained by Robert Sonnleitner and his team of webmasters, including Günther Melzer, Gunther Krauss and Hans-Detlev Buchner. The website [siebenbuenger.de](http://siebenbuenger.de) has been published by the Association of Transylvanian Saxons in Germany since 2000 and is its homepage. The three main functional areas of the Internet are covered: digital communication, digital publishing and Internet training for multipliers.

*Communication:* In the period before the turn of the century, the Web pages “Rokestuf”, which was run by Hans-Detlev Buchner, served as the most frequently visited common communication space for Transylvanian Saxons. In the 2000s, the forum on the website [siebenbuenger.de/treffpunkt/](http://siebenbuenger.de/treffpunkt/) took over this role. Since the establishment of Web 2.0, common communication has primarily taken place via the social media *Facebook, YouTube, WhatsApp, Instagram* and *TikTok*. The Corona period has led to a significant increase in *digital communication*. In 2020, the Transylvanian Saxons’ Homeland Day (*Heimattag*) was held exclusively in digital form for the first time. Since 2021, most of the events of the Homeland Day in Dinkelsbühl, Germany, have also been broadcast live over the Internet. These are coordinated by Hermann Depner.

*Publication:* When one asks Microsoft’s co-pilot for example about the Transylvanian Saxons, the website [siebenbuenger.de](http://siebenbuenger.de) is among others almost always stated as the source of the information. This is because this homepage has been posting new information on the Internet every day for more than two decades. The editorial team of the Transylvanian Newspaper (*Siebenbürgische Zeitung*), namely Siegbert Bruss (editor-in-chief) and Christian Schoger (deputy editor-in-chief), guarantees compliance with journalistic standards. In addition to the association, other Transylvanian Saxon associations have also carried out remarkable digitization projects. These include, for



**Johann Lauer.** E-Mail: [johann@lauer.biz](mailto:johann@lauer.biz). Homepage: [lauer.biz](http://lauer.biz).

Generative Artificial Intelligence and Transylvanian-Saxon Cultural Heritage.  
Opportunities and threats for acquisition, preservation and further development.

**Quelle:** [siebenbuergensachsen.de/generative-ai-saxon.pdf](http://siebenbuergensachsen.de/generative-ai-saxon.pdf).

example, the digital cataloging of the Transylvanian Saxon Library in Gundelsheim, Germany, ([Unser Service in Bibliothek und Archiv](#), our service in the library and archive) and the online availability of the document collection [Urkundenbuch zur Geschichte der Deutschen in Siebenbürgen](#) (document book on the history of the Germans in Transylvania).

*Internet training:* Once a year, an Internet seminar for multipliers takes place in the Heiligenhof in Bad Kissingen, during which the latest developments and tools for the Internet are presented.

### **Tasks: Digitization and concepts for appropriation, preservation and further development in the interests of the Transylvanian Saxon community**

The answers provided by generative AI can be influenced indirectly. This can be done in two ways: first, by digitizing and publishing the cultural heritage as completely as possible, and second, by using generative AI. Both measures lead to the training of generative AI.

With regard to the future appropriation, preservation and development of the Transylvanian Saxon cultural heritage, two strategic tasks have been outlined: on the one hand, the cultural heritage should be digitized as completely as possible. An appropriate digital infrastructure is essential for the systematic and comprehensive digital cataloguing and the digital publication of all physical artifacts and all written documents. In this respect, it would be necessary to digitize all 95,000 bibliographic units of the Transylvanian Library. It would also be necessary to develop concepts that include both axiological (ethical, political, social, etc.) and epistemological values. These are necessary in order to be able to evaluate the answers provided by generative AI and to enable a lively cultural development.

If these two tasks are successfully accomplished, the Transylvanian-Saxon cultural heritage will continue to exist in the future, holding the community together and shaping the identity of the Transylvanian Saxons, no matter where they live. Because in the future the following will still be true:

*“What you have inherited from your fathers,  
Appropriate it in order to possess it” (Johann Wolfgang von Goethe/Faust).  
„Was du ererbt von deinen Vätern hast,  
Erwirb es, um es zu besitzen“ (Johann Wolfgang von Goethe/Faust).*



**Johann Lauer.** E-Mail: [johann@lauer.biz](mailto:johann@lauer.biz). Homepage: [lauer.biz](http://lauer.biz).

Generative Artificial Intelligence and Transylvanian-Saxon Cultural Heritage.  
Opportunities and threats for acquisition, preservation and further development.

**Quelle:** [siebenbuergensachsen.de/generative-ai-saxon.pdf](http://siebenbuergensachsen.de/generative-ai-saxon.pdf).

## Acknowledgements

- I would like to thank the following people for their valuable suggestions and comments: Siegbert Bruss, Hans-Detlev Buchner, Konrad Gündisch, Günther Melzer, Jochen Philippi and Robert Sonnleitner.
- The responsibility for any remaining errors is my own.
- A printable PDF file (31 A4 pages) can be downloaded here: [siebenbuergersachsen.de/generative-ai-saxon.pdf](https://siebenbuergersachsen.de/generative-ai-saxon.pdf).

## Further articles by the author

Self-citations have been avoided, so verbatim copies of other articles I have written are not marked. The most important of my own publications on this subject are listed below.

- **2024:** [Philosophy of generative artificial intelligence \(AI\). Theoretical limitations and possibilities, practical benefits and threats of large language models:](https://lauer.biz/generative-ai.pdf) lauer.biz/generative-ai.pdf.
- **2003:** [Siebenbürger Sachsen - gestern, heute, morgen. Von einer festen Burg zu einem offenen Club](https://siebenbuergersachsen.de/geschichte/index.htm) (Transylvanian Saxons - yesterday, today, tomorrow. From a fortified castle to an open club): siebenbuergersachsen.de/geschichte/index.htm.
- **1999:** [Gemeinsame Kommunikationsräume im Internet](https://siebenbuenger.de/portal/daten/dokumente/50-jahre-lg-baden-wuerttemberg/perspek/23.htm) (Shared communication spaces on the Internet): siebenbuenger.de/portal/daten/dokumente/50-jahre-lg-baden-wuerttemberg/perspek/23.htm
- All my articles on [Transylvanian Saxon](#) topics, most unfortunately only in German, are linked on my Transylvanian Saxon website: siebenbuergersachsen.de.
- On this page you will find my other [publications](https://lauer.biz/publications.htm) (lauer.biz/publications.htm).



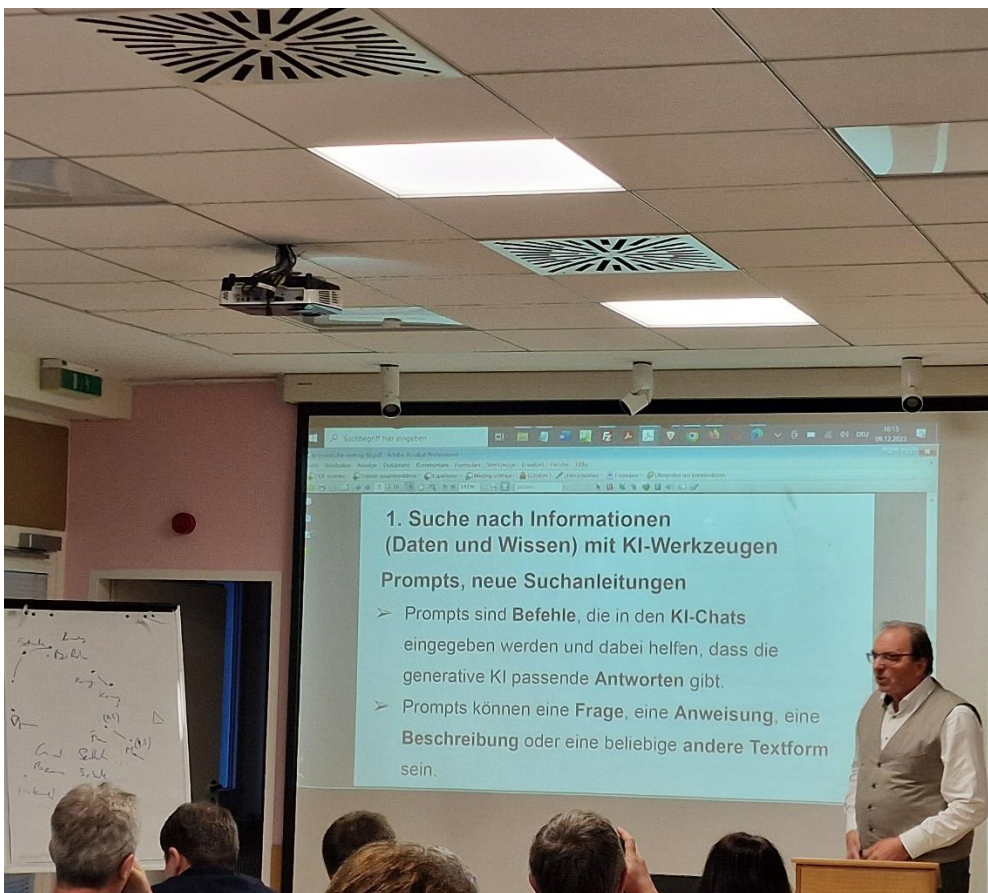
**Johann Lauer.** E-Mail: [johann@lauer.biz](mailto:johann@lauer.biz). Homepage: [lauer.biz](https://lauer.biz).

Generative Artificial Intelligence and Transylvanian-Saxon Cultural Heritage. Opportunities and threats for acquisition, preservation and further development.

**Quelle:** [siebenbuergensachsen.de/generative-ai-saxon.pdf](https://siebenbuergensachsen.de/generative-ai-saxon.pdf).

## Author

**Dr. Johann Lauer** is a philosopher and political scientist. He earned both the academic degree of Magister Artium in Philosophy and Doctor Rerum Politicarum from the University of Heidelberg. Further information about him as well as his research interests and publications can be found on his website: [lauer.biz](http://lauer.biz).



Johann Lauer, Heiligenhof, Bad Kissingen, Dezember 9, 2023.

Photo: Anja Babet-Täuber.



**Johann Lauer.** E-Mail: [johann@lauer.biz](mailto:johann@lauer.biz). Homepage: [lauer.biz](http://lauer.biz).

Generative Artificial Intelligence and Transylvanian-Saxon Cultural Heritage.  
Opportunities and threats for acquisition, preservation and further development.

**Quelle:** [siebenbuergensachsen.de/generative-ai-saxon.pdf](http://siebenbuergensachsen.de/generative-ai-saxon.pdf).