

Cultural consumption and COVID-19

Agnes Tassy, Statistics Denmark

Introduction

Cultural experiences are a big part of most Danes' everyday lives. Almost everyone (99 per cent) is consuming at least one cultural activity when culture is defined broadly. Especially cultural activities that take place at home are used diligently: 95 per cent of the adult population in Denmark is using cultural products and services e.g. films and series, music or news. Cultural activities outside the home are also popular. To visit concerts, museums and theaters is a very common way of socializing and sharing experiences with others. In addition to being a source of renewal and inspiration, art and culture are also the kit that binds groups and even nations together. People find community and a common understanding of the world around them through cultural experiences.

Cultural activities are thus a fundamental part of everyday life: everyone is consuming some type of culture. That is why it is important to dedicate public resources on understanding cultural consumption. The population's cultural engagement has been measured in Denmark since 1964, but only occasionally and at irregular intervals. The sporadic measurement ended in 2018, when the Ministry of Culture decided to dedicate resources to regular data collection in the form of the Danish Cultural Habits Survey (CHS).

Cultural consumption and COVID-19

COVID-19 has made a huge impact on many different aspects of our lives since the beginning of 2020. The way we consume cultural products and services has also been strongly affected by lockdowns and fear of infection. After more than two years, the pandemic seems to reach its end now. It is interesting to have a closer look at the following questions relating to cultural consumption and COVID-19:

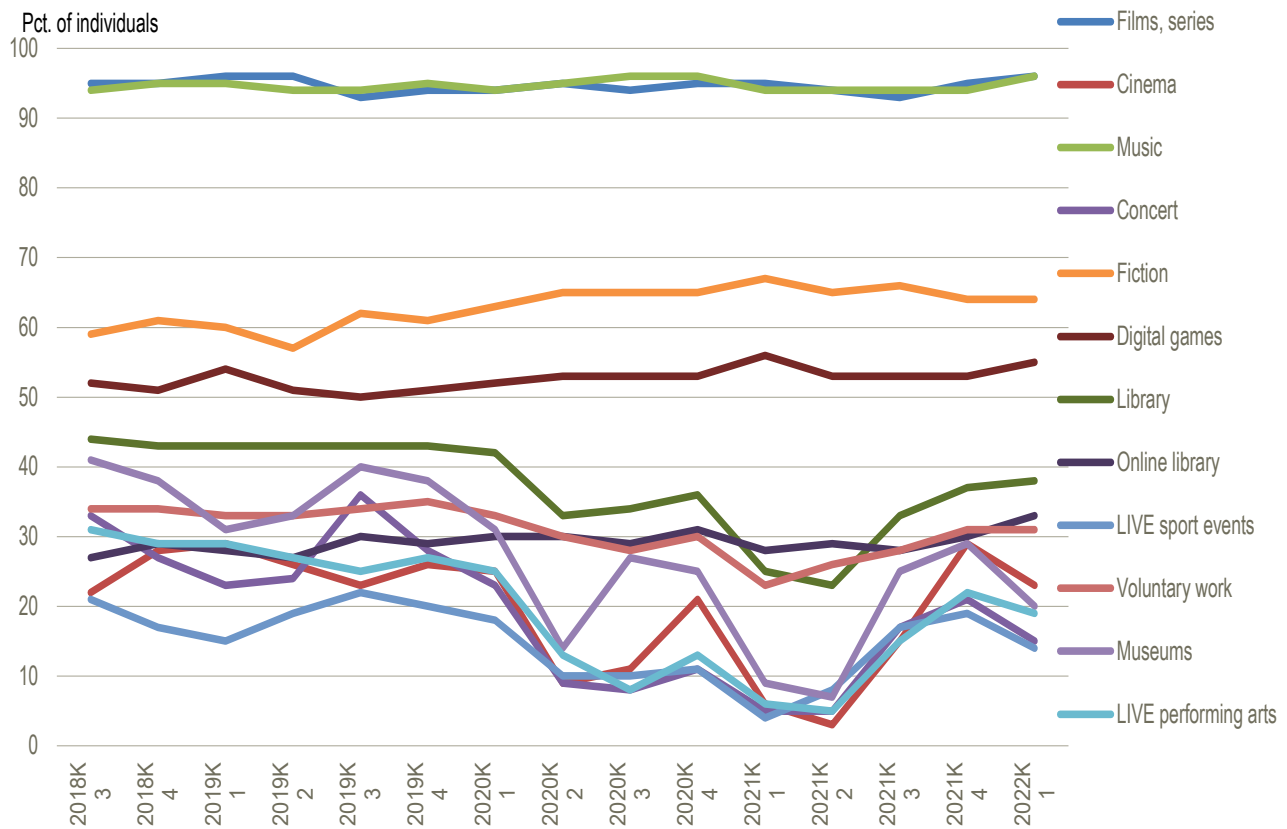
- Which cultural activities and sectors have been affected most by COVID-19?
- Is there a difference between the characteristics of pre- and post-pandemic cultural consumers?
- How can we characterize the groups of people who returned to the museums, concerts, etc. after the lockdowns? Are there groups that did not return?
- Has cultural consumption become more digital between 2018 and 2021? Which cultural domains are most affected?

To analyse these question we use the Danish CHS, which started in 2018. 'Demand side' information from the CHS is an excellent supplement to existing 'supply side' statistics collected from cultural institutions e.g. museums, theaters and cinemas. Through CHS, it is possible to monitor the population's cultural habits before, during and after the pandemic.

Facts matter: the effect of COVID-19 on cultural consumption in Denmark

The CHS has now been running for 15 quarters and provides users with rather frequent demand side data about the population's cultural habits. Consider the figure below that shows the share of adult population engaged in selected cultural activities from the 3rd quarter of 2018 to the 1st quarter of 2022.

Figure 1. Participation in selected cultural activities 2018K3-2022K1



While a few frequent activities like watching films and series, reading or listening to news or to music, typically consumed at home, have not been much affected by COVID-19, other activities show a ‘more exciting’ W-shaped curve. Most cultural activities included in the survey e.g. visits to libraries, museums, theaters and galleries etc. have decreased after the first quarter of 2020, a quarter that marks the arrival of the pandemic. Visitor numbers picked up during the summer of 2020 when public places reopened, only to drop sharply again from the end of 2020, due to a second lock down. This is the reason behind the W-shaped lines for many cultural activities that take place outside the home. Supply side data from cultural institutions tell the same story of falling number of visits or tickets sold during 2020 and 2021¹.

¹ See for example the following public tables with supply side data :
 Supply-side data from cinemas www.statistikbanken.dk/BIO2
 Supply-side data from theaters www.statistikbanken.dk/SCENE01B
 Supply-side data from museums www.statistikbanken.dk/MUS1

To better understand the cause behind the double dip in cultural consumption, it is useful to review COVID-19 lockdowns in Denmark.

The first general and rather strict lockdown hit Denmark in the middle of March 2020 and continued until 18 May 2020. During the summer of 2020, cultural institutions were open in Denmark while travels abroad were still restricted. The Danish government has encouraged domestic cultural participation and tourism by offering discounted tickets to museums etc. and by making public transport financially more accessible. These circumstances did indeed result in more cultural participation. This is clearly seen in Figure 1, where most cultural activities increase during the summer of 2020. At this point, however, there is no vaccine yet and the long-term effects of contracting COVID-19 are still unknown. The fear of possible COVID-19 infections made many citizens avoid visiting public places. This uncertainty factor had negative impact on cultural engagement in activities taking place outside the home.

Short introduction to the Danish CHS

Data is collected quarterly since the 3rd quarter of 2018. The quarterly sample consists of around 7.000 individuals (16 years or older) with an address registered in Denmark. The questionnaire covers cultural, free time and sport related activities as well as the consumption of news. The scope of the survey is based on the UN statistical framework of cultural consumption. The majority of the questions included each quarter is the same. A small number of questions are included as part of a flexible module. This module is intended to cover ad hoc data needs.

Questionnaire data is enriched with background information about the respondents from a number of registers. Background information includes, among other indicators age, sex, socio-economic status, family status, parents' education level, education, racial origin, civil status and income levels.

Cultural participation is defined as taking part or consuming selected cultural products or services within the past three months or the past week from the time of the interview. The intensity of cultural consumption is modelled by counting the number of activities respondents engaged in, within selected cultural activity baskets. Due to quarterly data collection frequency, it is possible to divide the results into 'pre-COVID-19', 'during COVID-19' and 'post COVID-19' time periods.

After some months with falling numbers of new corona cases the second wave of COVID-19 infections arrived in the winter of 2020. The government ordered a second general lockdown that started in December 2020 and lasted for about five months. At this point around 20 pct.

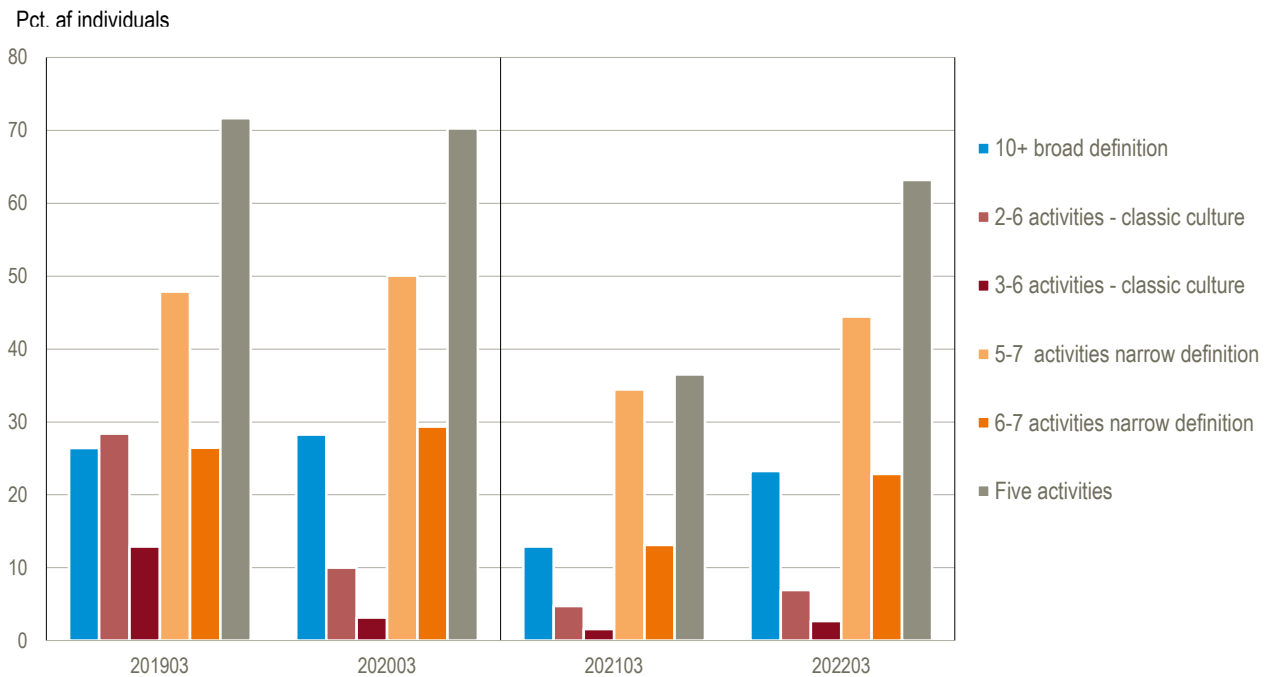
of the population was vaccinated. As we approach the second half of 2021, most activities became more popular again. Vaccination rates reached over 80 pct. by the end of 2021 when the third wave of the pandemic reached Denmark. At that point, Denmark had one of the highest vaccination rates. Despite high vaccination rates, the super spreading omicron variant infected 40.000-50.000 people daily. The high number of daily new cases during winter 2021/2022 is most probably one of the main reasons behind the fact, that engagement in cultural activities measured in the 1st quarter of 2022, did not reach levels measured during pre-pandemic first quarters.

Until now, we have considered individual cultural activities. Another way of looking at cultural habits is to compose baskets of cultural products. Most people are usually engaged in more than a few cultural activities. The number of activities an individual is pursuing can also give an indication about the 'intensity' of his or her cultural engagement².

Let us have a closer look at the development in cultural engagement in selected baskets of cultural activities. Some cultural activities are characterized by seasonality e.g. live performances within performing arts follow theater seasons. Using baskets of cultural activity baskets decreases the effect of seasonality. To further minimize seasonal effects, the following figure compares data for the same quarters in 2019, 2020, 2021 and 2022. Figure 2 shows engagement in selected cultural baskets comprising between 5 and 13 different cultural products. For all the different combinations shown in the figure, we observe a drop during 2020 and 2021 followed by an increase in 2022. Once again, 2022 levels do not reach pre-pandemic levels.

² For a more detailed study of cultural engagement, refer to [the cultural consumption profile analysis](#). In this cluster analysis, the population is divided into five groups based on their cultural consumption pattern.

Figure 2. Cultural participation – selected activity baskets



Note: To model more intensive cultural consumption we can consider shares of the population engaged in several activities within each basket. For example the basket of classic culture includes the following six activities: live performances of opera, theater, musical or ballet, classical concerts and art museums. More intensive use of classical culture is modelled by having participated in at least 3 of these 6 activities during the given quarter. Another, broader basket defines cultural consumption with a larger scope including 13 activities. More active users are modelled as having been engaged in at least 10 of the 13 activities. A basket with a narrower definition includes 7 activities. Film, music, fine arts, libraries, literature and live performances of performing arts. The basket of 'Five activities' involving visiting places outside the home covers museums, libraries, performing arts, cinemas and concerts.

Conclusion: whether we consider individual activities shown in figure 1 or consumer baskets of cultural activities as in figure 2, we observe the same tendency. Cultural consumption decreases sharply after the start of the pandemic (1Q2020) and drops to record low levels in 2021. All indicators show an increase between 2021 and 2022. However, 'post-pandemic' 1Q2022 levels are under pre-COVID levels for all selected baskets of cultural activities.

Which cultural activities and sectors were most affected by COVID-19?

The closures of the cultural institutions meant that fewer people used cultural facilities outside the home. In other words, a significant share of time spent on cultural activities has moved from outside the home to inside the home³. This conclusion is 'visible' both in figure 1 and the following figures 3-10. Cultural activities that experienced relatively deepest declines were cinema visits, concerts and performing arts, visits to museums and physical visits to the library. Participation in the mentioned activities has decreased significantly compared to pre-COVID-levels. The largest relative increase is seen in the use of libraries' digital services and in the consumption of fiction and non-fiction. More people read or listen to books in the first quarter of 2022 compared to the same period three years before.

A closer look at selected cultural activities

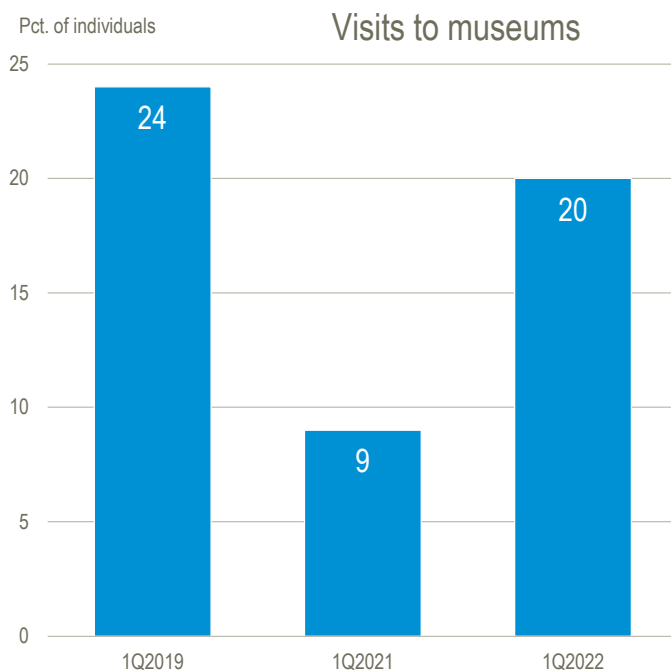
Moving on to the specific discussions and results on the following pages, we examine selected cultural activities starting with [visits to museums](#). Before the pandemic one out of four adults in Denmark visited museums⁴ during the three months period prior to the interview date in the first quarter of 2019. This share has dropped to 9 per cent by the first quarter of 2021 and bounced back to 20 per cent in the first quarter of 2022.

During the pandemic (1Q2021) people without children, individuals with other ethnic background than Danish, women and older visitors have become less frequent sight in museums. On the other hand, there was a slight increase in the share of museum guests with the following characteristics: couples with children, men and people in age group of 25-34 years old. The change in the characteristics of museum guests seems to be temporary: post pandemic visitors look much the same as pre-pandemic guests.

³ Find more information about the transition of cultural activities from outside to inside the home her: <https://www.dst.dk/da/presse/Pressemeddelelser/2022/2022-03-18-kultur-nedlukninger-flyttede-kulturen-ind-i-stuen>

⁴ Museums cover three types of museums: natural history, art museums and historical museums.

Figure 3. Visits to museums



Concert visits⁵ show similar development to museum visits. About the same share of individuals visited concerts and museums before the pandemic in the first quarter of 2019. The decrease for concert visits was deeper than for museums during 2021, with only 5 per cent of the population participating in live concerts in the first quarter of 2021. Live music lover concert guests have returned after the pandemic but not yet to the same extent as before COVID-19.

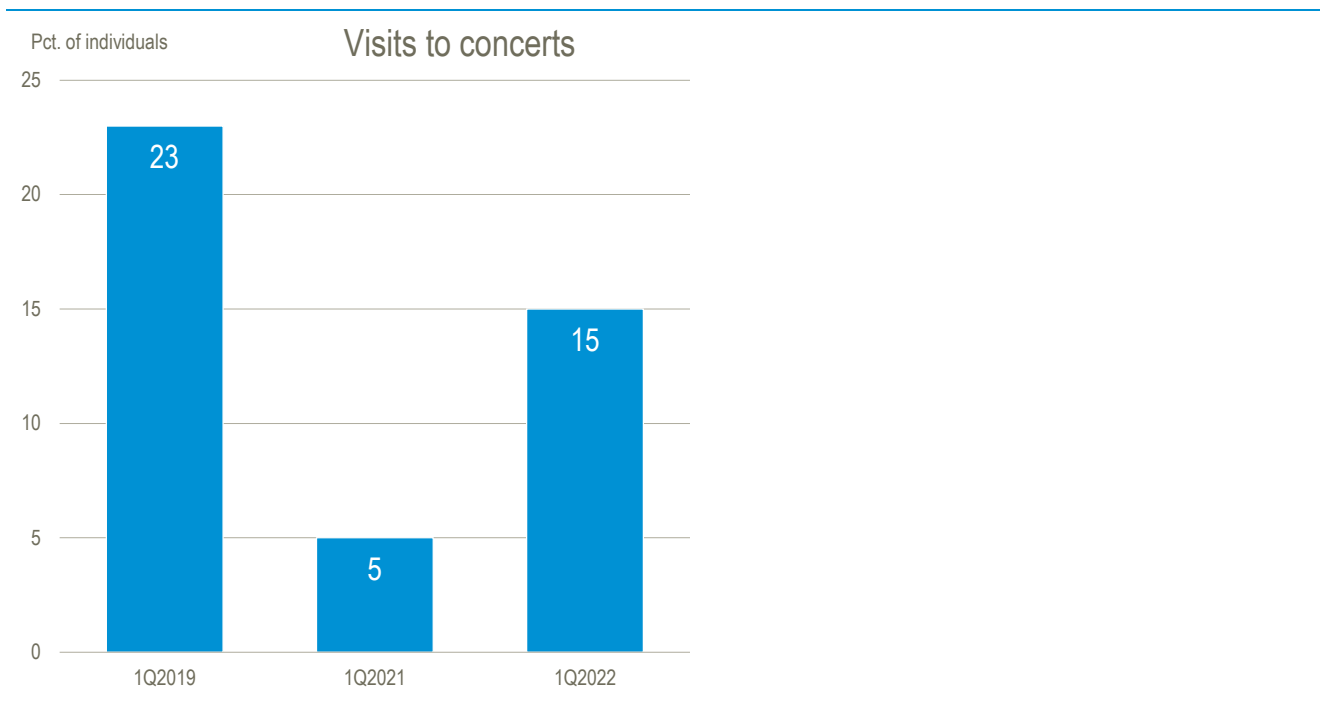
Especially women stayed home from concerts during the pandemic. The data also indicates a weak shift towards decreased share of younger concert guests. This observation can possibly be explained by the cancellation of many festivals, live music events with high numbers of mostly younger guests⁶.

Once again, pre-pandemic concertgoers seem to be returning to live music events in the beginning of 2022.

⁵ Definition of concerts: Concerts are LIVE music events open to public access independent of the type of music.

⁶ For more detailed information regarding live music events and festivals please refer to the following article: <https://www.dst.dk/da/Statistik/nyheder-analyser-publ/nyt/NytHtml?cid=38756>

Figure 4. Visits to concerts

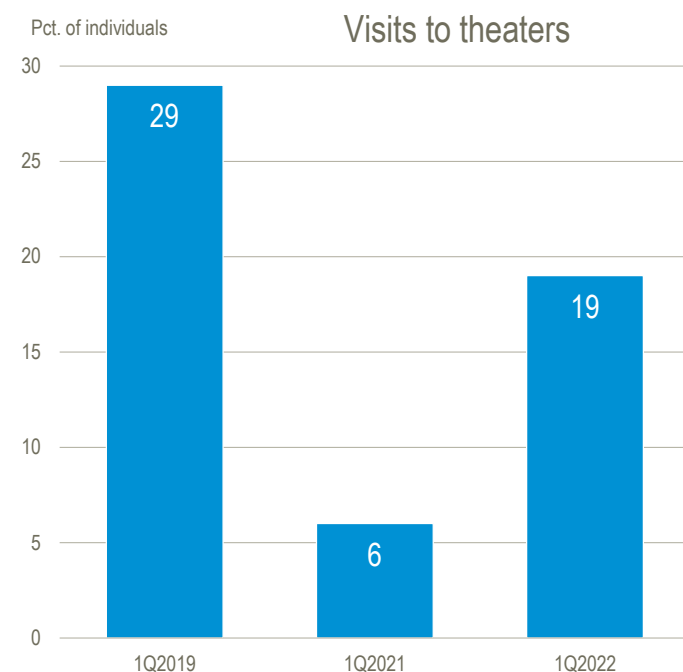


The share of theater⁷ quests fell with 80 per cent from 29 per cent in 1Q2019 to 6 per cent in 1Q2021. Once again, the post COVID level of theater visits is significantly below the pre-COVID share.

Individuals with low education, women and older citizens stayed home in higher extent than other groups of theater enthusiasts during 2021. On the other hand, the share of theater quests with high education shows a slight increase between 2019 and 2022. Data indicates that female theatergoers have returned to enjoying live performances in the beginning of 2022 when the share of theater guests with higher education is still higher than it was before the pandemic.

⁷ Definition of theater: live performances independent of the type of performing arts e.g. opera, musical, stand-up.

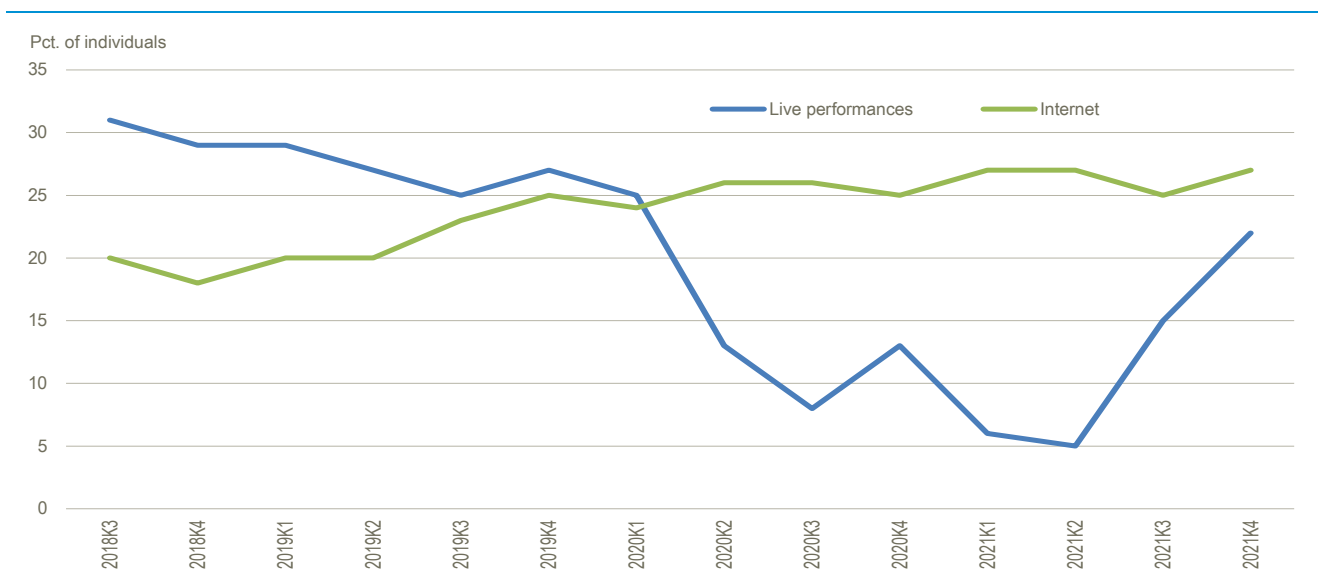
Figure 5. Visits to theaters



With the help of another question in the CHS, it is possible to estimate the share of the population consuming performing arts divided into different ways of consumption. Attending live performances is the classical channel but enjoying performing arts through the internet is gaining more and more popularity. Consuming online performances are not limited by lock downs. Due to the pandemic, the share of theaters that made their performances available through streaming has also increased resulting in more content being available online.

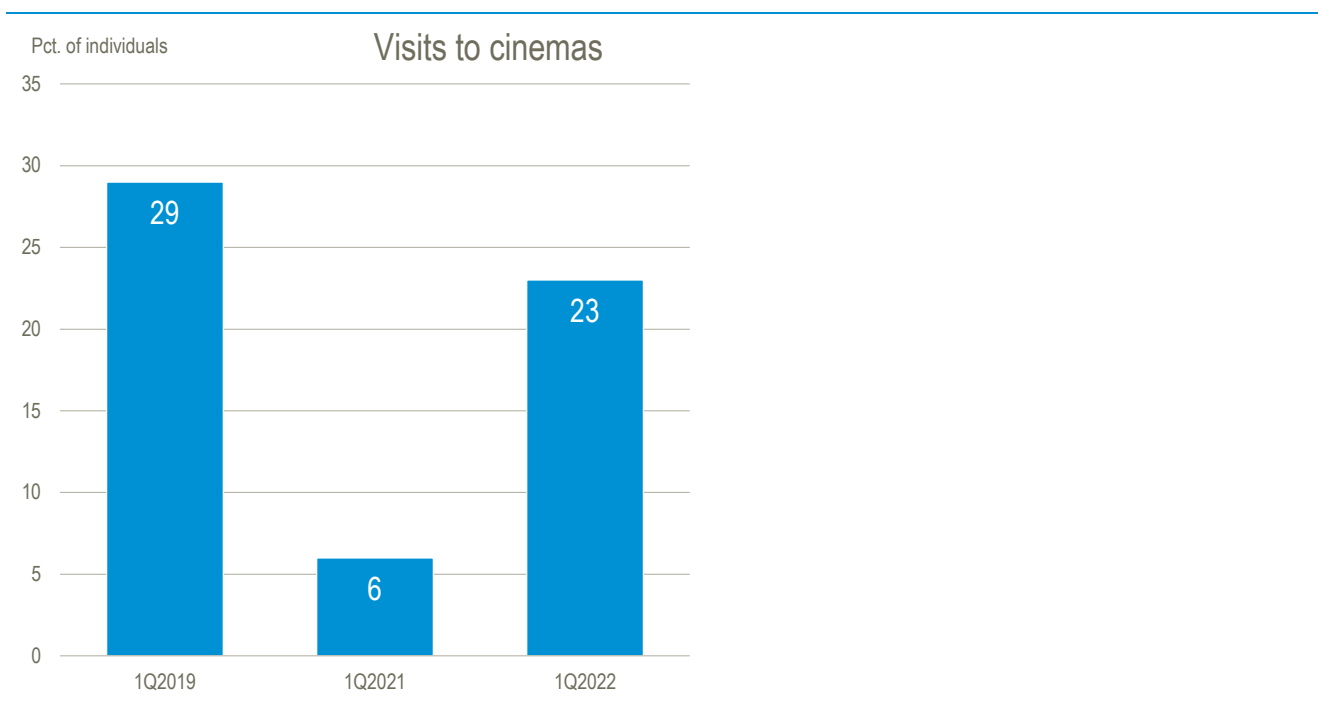
A closer look at the two lines on figure 6 indicates a minimal level of substitution. When the blue line of physical visits drop sharply, there is an upward shape in the grey line (internet) around the first two quarters of 2020. Increased physical visits (2020K4) are paired with a decrease in internet consumption. From the 4th quarter of 2020, where physical visits are falling again, consumption via the internet seems to increase. In general, the share of the population consuming performing arts through internet has an upward direction. This is possibly due to more performances being available via streaming and the general trend of increased digitalization.

Figure 6. Consumption of performing arts: live performances vs. streaming



The share of [moviegoers](#) reached 29 pct. of the adult population in the first quarter of 2019. This share dropped to 6 per cent in 1Q2021 and increased to 23 per cent a year later.

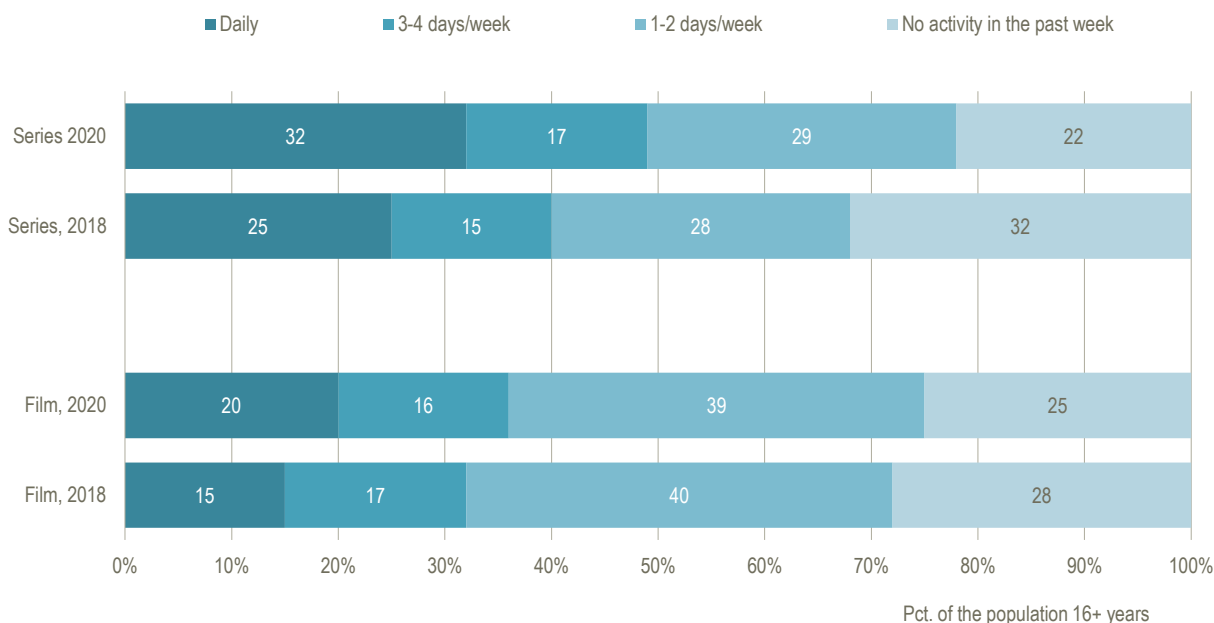
Figure 7. Visits to cinemas



Female guests to cinemas were more affected by COVID-19 than male moviegoers. Once again, women stayed home in relatively higher numbers during 2021. The same is true for ethnic Danes and individuals with address in densely populated areas. Data indicates that the share of male visitors as well as the share of older people have slightly increased after the start of the pandemic.

It could be that some of the cinema visits were substituted by more frequent consumption of films and series at home. This assumption is based on CHS figures regarding the consumption of films and series. While the same share of the population watched films and series after the start of the pandemic, the frequency of the consumption has increased significantly⁸. Figure 8. shows, that this is especially true for series. Consumption of films has also grown, albeit to a lesser extent than consumption of series. Streaming is especially popular among younger Danes who also consume films and series in a higher extent.

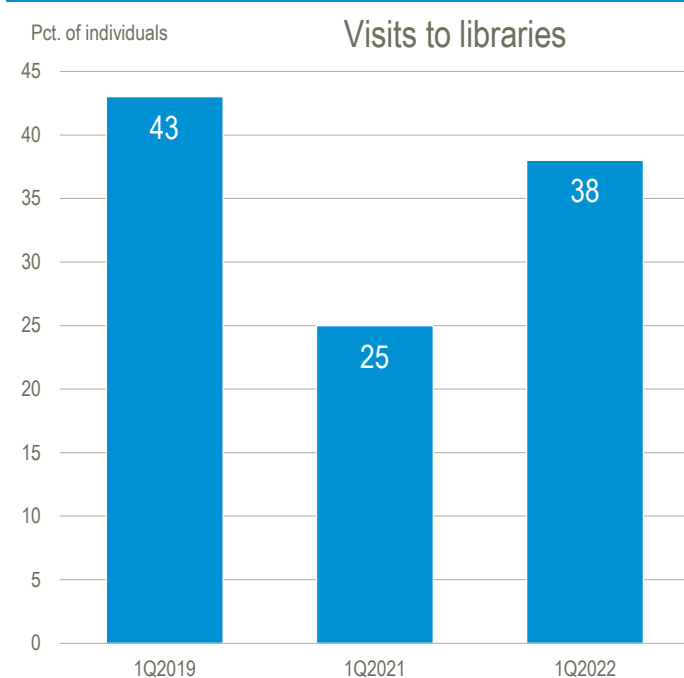
Figure 8. Frequency of watching films and series 2018 and 2020



⁸ For more details on the consumption of films and series please read this article: <https://www.dst.dk/da/Statistik/nyheder-analyser-publ/nyt/NytHtml?cid=34761>

Compared to other cultural institutions the pandemic has had a relatively smaller impact on **libraries**. The share of individuals having visited a library was 43 per cent in 1Q2019 and 25 per cent in 1Q2021. In the first quarter of 2022, 38 per cent of the adult population has visited a library building, a share that is not too far from the pre-pandemic level.

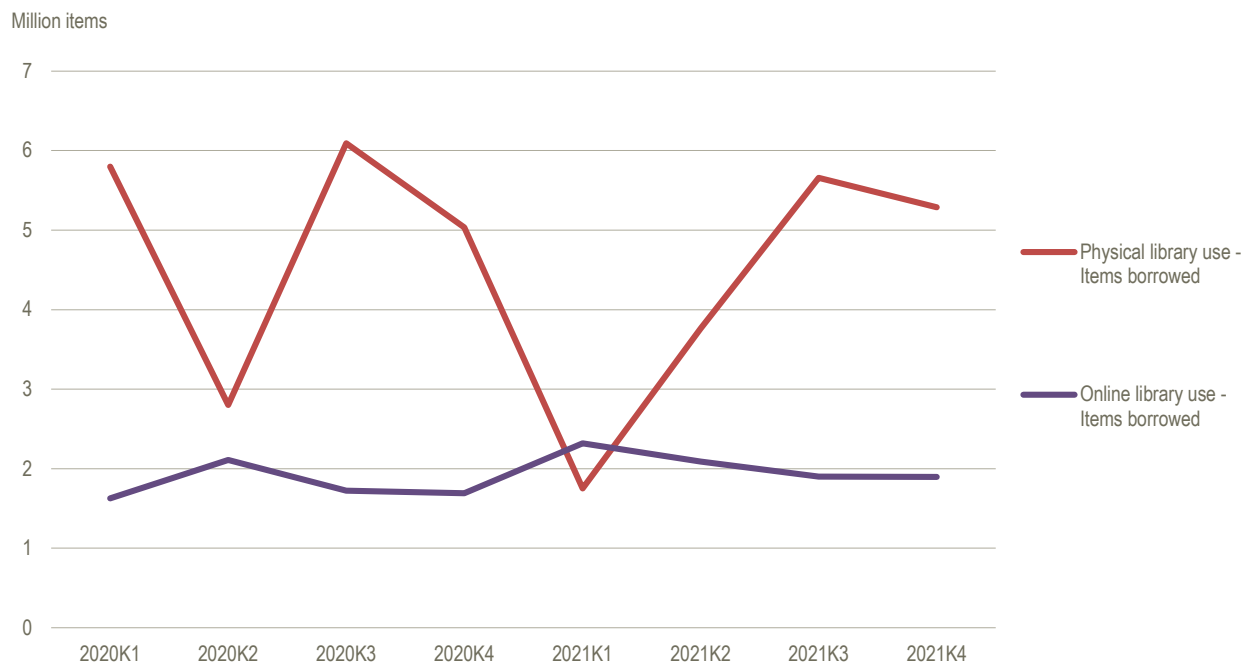
Figure 9. Visits to libraries



The share of women visiting libraries decreased in 2021. However, female visitors are back in the libraries in the start of 2022. The share of younger library guests has also dropped slightly during the pandemic. Data regarding the use of libraries' online resources⁹ indicate that especially younger library users have switched from physical visits to online services. Figure 9. below shows that a dip in physical library use, in the periods 2020K1-2020K2 and 2020K4-2021K1, is accompanied by an increase in online library use, when measured by the number of items borrowed physically versus online.

⁹ This data comes from the statistics on library use. See the links <https://www.dst.dk/en/Statistik/emner/kultur-og-fritid/biblioteker> and www.statbank.dk/IBIB2.

Figure 10. Library use: physical visits vs. online use



We can now sum up the information learnt from a closer look at the individual cultural domains. While there has been temporary changes in the characteristics of groups visiting museums, theaters, libraries, concerts and cinemas, the changes do not seem to last. With other words the groups of people who returned to the museums, concerts, etc. after the lockdowns, are rather similar to the groups consuming the same cultural products and services before the pandemic. Our research has not found any indication of specific groups of people that did not return to visiting the mentioned cultural institutions.

Data seems to indicate that non-traditional channels of consumption via the internet have become more popular during the past 3 years. It is difficult to establish whether this development is due to substitution or whether it is more of a general trend of increased digitalization that can be observed in almost all areas of everyday life. Digital use seems to substitute physical use when it comes to libraries. When libraries are open again, digital use

decreases. Other areas e.g. visual arts¹⁰, performing arts¹¹, show a slow constant increase in the use of digital channels.

What can we learn from CHS about cultural consumers and cultural establishments?

Figures shown on the previous pages confirm that especially older women are likely to stay away from cultural activities outside the home in a pandemic situation. Having more detailed knowledge about the groups of people likely to decrease cultural engagement is useful to facilitate the promotion of more cultural engagement in selected groups.

Learning more about the fluctuations in cultural engagement outside the home can help us to minimize possible negative consequences. We know for example, that decreased cultural activities can influence citizens' wellbeing in a negative way. Visiting museums, exhibitions and galleries are the cultural activities most people enjoy consuming together with others. Museum visits mostly happen in company with others, as 94 per cent. of the visitors to museums most often or always come together with others¹². Cultural activities are a good way to fight loneliness. When museums etc. close under lock downs, citizens' well being is affected, especially when it comes to people who live alone.

Cultural establishments are financially challenged by falling visitor numbers. The rapidly available data from CHS can help us forecast developments in the economic data of the cultural sector. Typically, this type of data is only available with a considerable time lag.

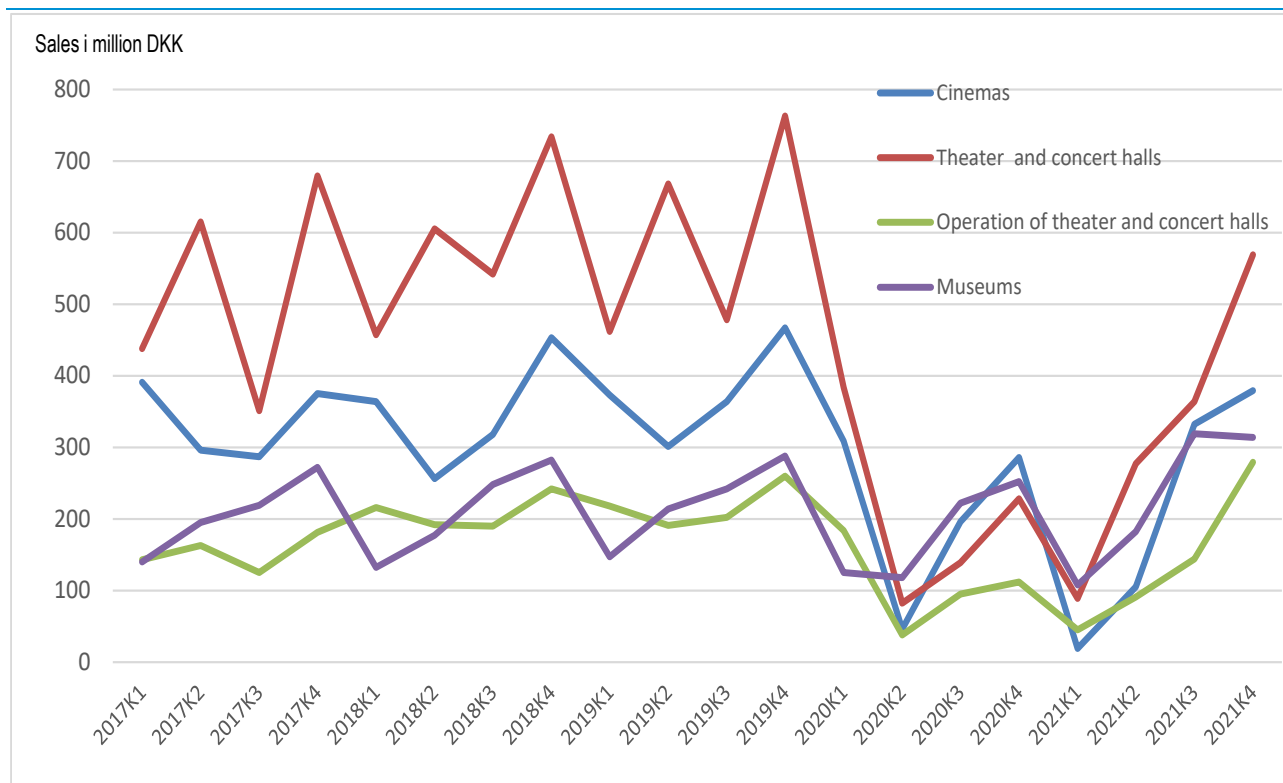
To confirm the above stated link between visitor numbers and the economic performance of cultural establishments, let us consider data from the Danish VAT system that covers purchases and sales reported by firms. Figure 11 includes sales figures from four types of cultural establishments: cinemas, concert halls and theaters, operation of concert halls and theaters and museums. Total sales in all the four types of companies suffered significantly during 2020 and 2021. Figure 11 shows the same W-shape lines seen earlier in the data about the share of the population engaged in these cultural domains (figure 1).

¹⁰ www.statistikbanken.dk/KVUBK02

¹¹ www.statistikbanken.dk/KVUSC1

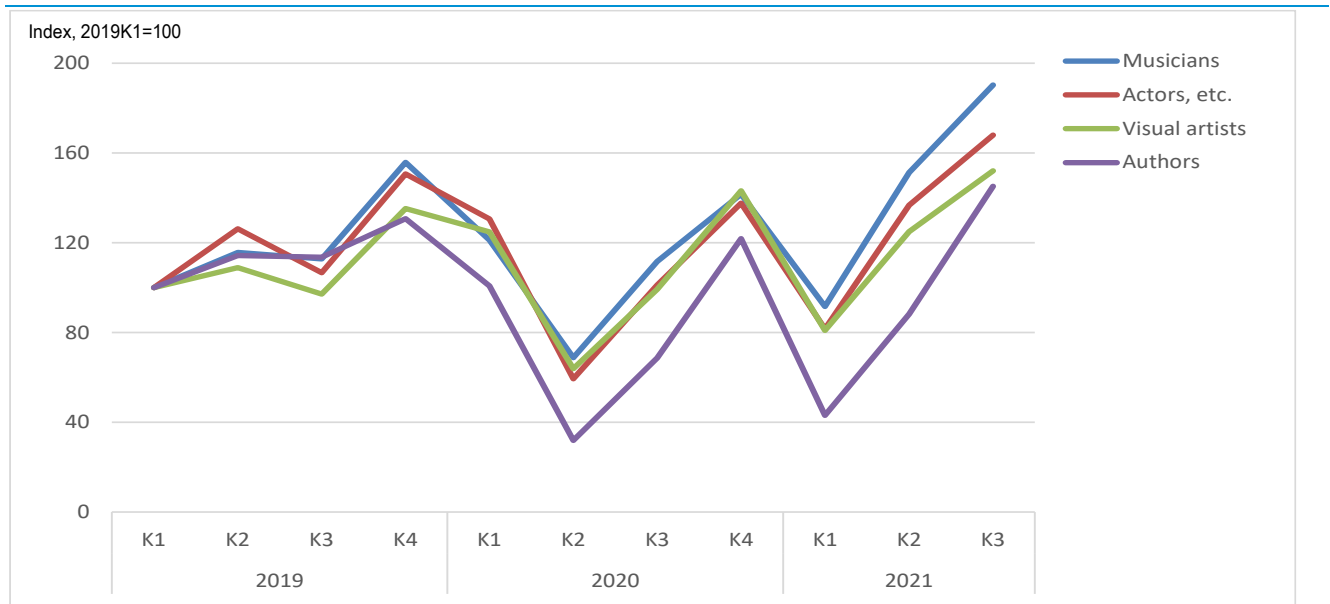
¹² See more information about cultural consumption as social activity in this article: <https://www.dst.dk/da/Statistik/nyheder-analyser-publ/nyt/NytHtml?cid=31795>

Figure 11. Sales – selected companies active in the cultural sector



Another possible source for the economic data on the cultural sector is the national register over personal income. When looking at income data for self-employed artist active within music, performing and visual arts, the same development can be observed. Income levels follow a W-shaped curve presenting deep drops during 2020 and again during 2021.

Figure 12 – Revenue index for artists active in selected art forms



Based on the last two figures we can conclude that cultural institutions and artist suffer economic consequences of decreasing cultural engagement. CHS data is a useful indicator for the economic performance of artists and cultural institutions and can be helpful e.g. when deciding on the nature and size of state aid to compensate for lockdowns.

What can we learn in terms of methodology and future CHS surveys?

Under normal circumstances, cultural consumption does not change significantly from one quarter to the other. In times of turbulence, however, it has been useful to be able to monitor cultural consumption on quarterly bases. Indeed, data even allows for considering weekly or daily cultural engagement figures. Looking towards the future, we consider decreasing the frequency of CHS surveys in Denmark going from 4 times a year to only 2 times a year.

Another take away is the importance of including questions regarding non-traditional channels of consumption in surveys about cultural engagement. Streaming of live performances is here to stay as digitalization plays an ever-increasing role in the way we live and consume cultural services and products.

Final note

At the time of submitting the first version of this paper, we were more optimistic about the end of the pandemic. As I am writing these final lines, COVID-19 infections are picking up. It is probably too early to say that the pandemic is over. Happily, CHS still runs as a quarterly survey at least until the end 2022. We can therefore continue to monitor developments in cultural engagement throughout the summer, autumn and winter of 2022. An exercise that will provide more knowledge about cultural consumption in turbulent times.