## Per Dahl

# *Tidying up tempo variations in Grieg's Op. 5 No.3*

Recordings as historical documents offer a variety of data about music and musical life. Compared with the information we get from the score, the record is much closer to the performance practice. It would be wrong to think of the recordings only as additional information to the score, because the gramophone medium establishes itself with a number of internal rules. The technical development in the recording industry created restrictions and new possibilities for music performance, and different kinds of performance practices were recorded on a soundtrack without any notation system. In the search for musicologically interesting data from the recordings, it is therefore necessary to keep in mind the nonlinear relationship between the score from the composer and the sound documented on recordings.

I have used the commercial gramophone recordings of Grieg's "Jeg elsker Dig! /Ich liebe dich/ I love thee/" in order to study how the interpretation of this song has changed in the 20th century. The song was extremely popular in Grieg's lifetime. In addition to volumes of Grieg songs both from Wilhelm Hansen in Copenhagen and Peters in Leipzig, Peters also made this song available as separate sheet music of which they produced more than 60.000 copies for the European market in 23 years between 1883-1906.

Grieg frequently used this song at concerts both with his wife Nina and with other singers. Unfortunately there is no recording with Nina, but I have recordings with the Norwegian singer Cally Monrad, who often performed this song with Grieg. Last time was in Prague April 16. 1906, but a note in Grieg's diary reduces the importance of this interpretation as an authentic Grieg-interpretation. I quote: "Cally Monrad sung wonderfully, but far away from my intentions."

In my analysis of recordings of this song I was especially interested in finding empirical data that would support Robert Philip's convincing statement that: "The most basic trend of all was a process of tidying up performance: ensemble became more tightly disciplined; pianists played chords more strictly together, and abandoned the old practice of dislocating melody from accompaniment; the interpretation of note-values became more literal, and the nature of rubato changed, becoming more regular and even." (Philip 2004: Performing Music in the Age of Recording p.232). My discography contains 318 entries distributed chronologically from 1899 to 2005, and I have been able to analyse the soundtrack on 214 of these recordings.

In general most of the music expressions are tied up to the quality of the reproduced sound, from the sonority of voice and accompaniment, via the dynamics and reverberation time, articulation, orchestration, down to the balance and microphone placement, etc. These qualities might be measured in simple ways, and I have done that, but then by using a simple category system for each parameter.

The most important music elements of a performance that are not connected to the sound image of a recording are the actual form of the piece and the tempo of the interpretation. In vocal music the language of the performance is also

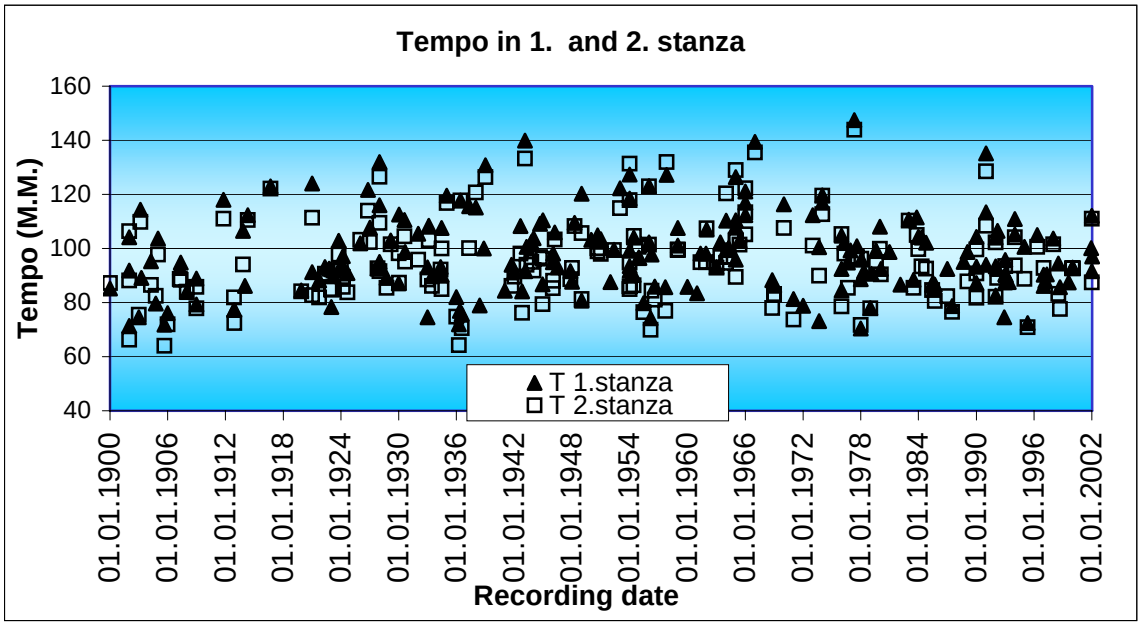
independent of developments in the recording industry. In the present case though, the choice of language has general historical and cultural connotations.

In this song Grieg uses a one-stanza poem by H. C. Andersen. But when C. F. Peters in Leipzig published the song from 1875, another stanza was added, without any marking where to start the repetition. The German text was then used for all other translations to more than 20 languages. A registration of language and form shows that in the beginning of the century the German Lied was the standard of all performances of romances. Even when sung in Norwegian, the two-stanza form was the model, singing Andersen's text twice. Only in the last 20 years has the performance in accordance with Grieg's manuscript gained more interest, even by non-Scandinavian singers.

The tempo variations are in my view the most informative parameter of music performances independent of the record's soundscape. Today I will present some approaches to measure the variability of interpretations, by using the software programme Transcribe! and some statistics. Combined with information about the singer, the record and other information concerning the performance, it was possible to relate tempo variations to a number of other dimensions of the interpretation and to the development of performance practice.

I started by transferring each recording to my computer (using Sony Sound Forge equipment). After editing I got a duration time for each performance and could make an overview of my population. The traditional assumption that the tempo was slower in the old recordings was not confirmed at all. There have been great individual differences all through the century, as my figure 1 will show, but the arithmetic mean for the tempo have been the same throughout the century.

Figure 1 (Tempo in 1. and 2. stanza, distributed by recording date)




This stability remains even if we split the recordings according to the singer's age at the recording, or to their other repertoire. The operetta- and musical-singers are though a bit faster than Wagner-singers. Women dwell upon saying I love you more than men (for reasons I will not comment here). And recordings made

in the concert hall tradition have a slower tempo than those made for the commercial market of listeners who seldom goes to concerts, but enjoy music from the gramophone record. Variations observable in the data do not reveal any hints about a process of tidying up performances.

My next step was to divide the score to several sections. As I mentioned earlier the song was originally in one stanza, and there has been several different ways of linking the two stanzas. Therefore I chose to focus on the tempo variations in that part of the song with the lyrics, though I marked several sections in the (piano) introduction and the (piano) ending of the piece as well. For each section I counted the quavers in order to calculate the tempo of each section. In this piece by Grieg it was quiet easy to find a suitable phraseology that allowed sectioning in relation to tempo variations.

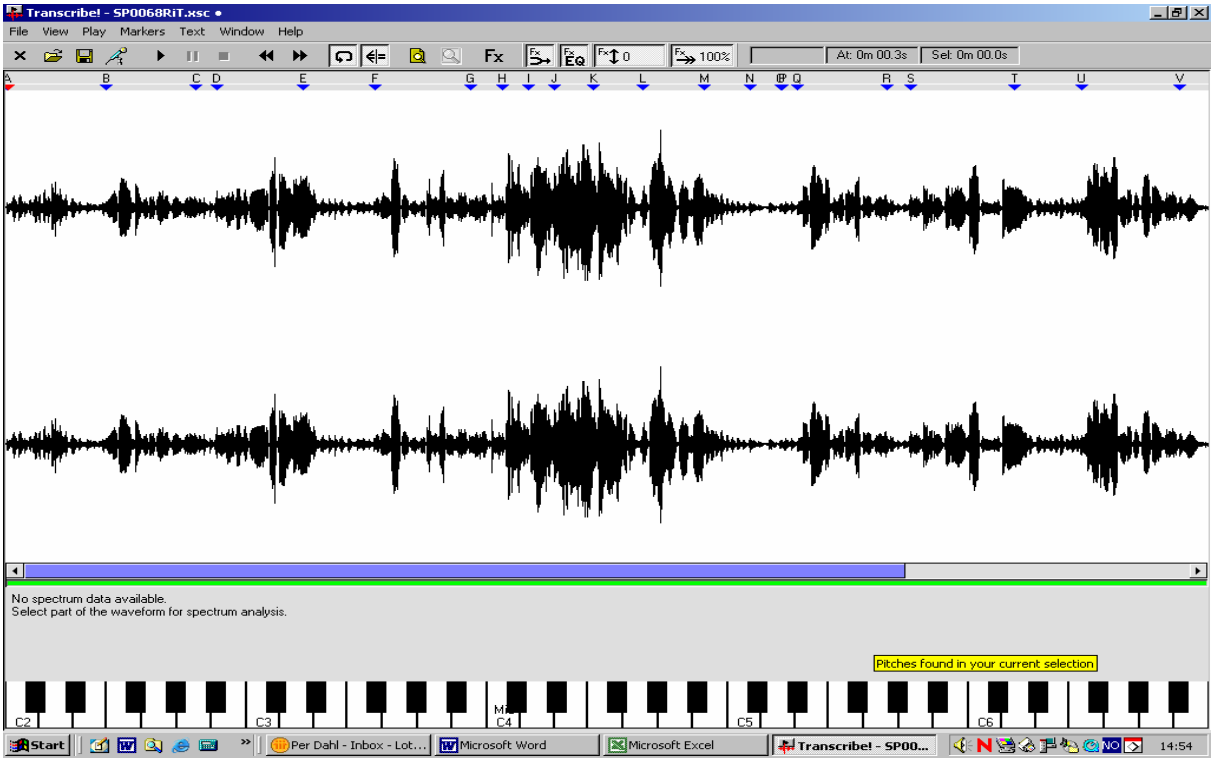
*[The score with sections on overhead]*

Then I decided that the singer's first section (verse) was to be set as the tempo of the interpretation. I could then calculate a relative tempo of each section in a performance, and I could compare the deviations of tempo in each section by different singers independent of their performing tempo.

In order to acquire the data needed from the recordings for these calculations I used the software programme Transcribe! One advantage of this programme is the possibility to transform the marks of a performance directly to an Excel-formula. When listening, it is also possible to reduce the tempo without changing the pitch (very convenient listening to bass-singers). So the task was rather simple; just listen to 214 different recordings of Jeg elsker Dig, make the necessary marks with as much accuracy as possible and start the calculating.

An example; Richard Tauber's first recording from 17.March 1924, with Carl Best piano. Starting with the music in Transcribe!

Figure 2



In Excel the first stanza looks like this:

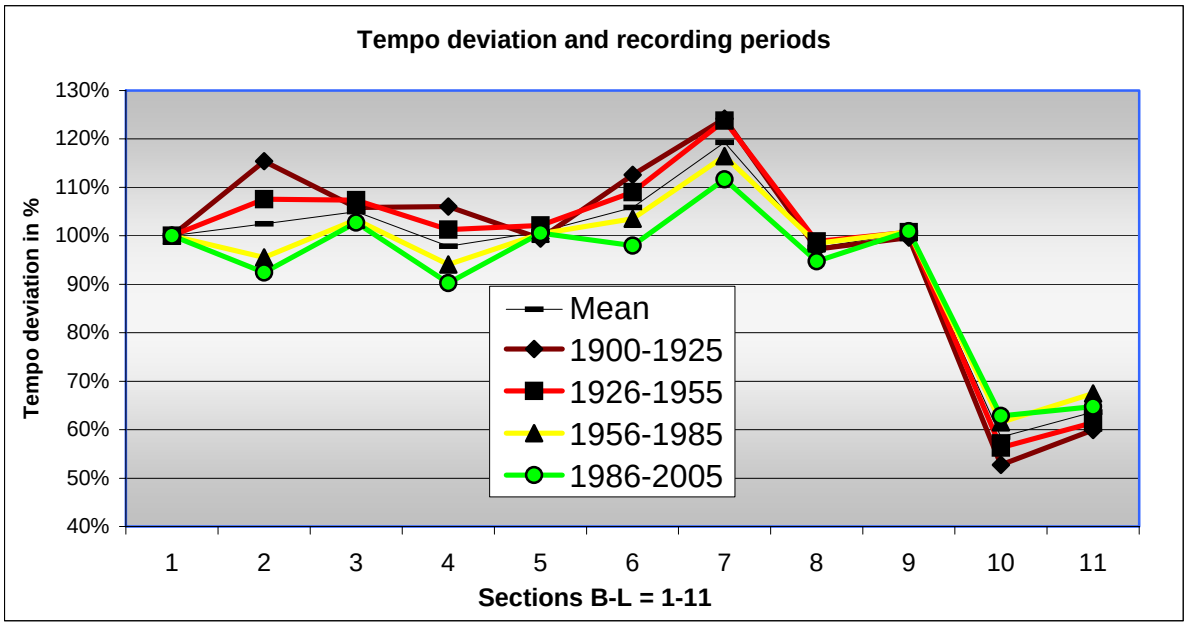
Figure 3

| | | | | | | |
|---|---|---|---|---|---|---|
| Sound FileName | D:\\Jeg elsker Dig\\SP0068RiT.WAV | | | | | |
| SectionStart | | | | | | |
| 31 | | Deviation | Durata | Time | Tempo | |
| 6645 | A | 1,294 | 0:00:00.151 | 9,07 | 119,1 | |
| 406641 | B | 1,000 | 0:00:09.221 | 8,47 | 92,0 | |
| 780374 | C | 1,387 | 0:00:17.696 | 1,88 | 127,7 | |
| 863273 | D | 1,051 | 0:00:19.575 | 8,07 | 96,7 | |
| 1218959 | E | 0,805 | 0:00:27.641 | 6,62 | 108,8 | |
| 1510779 | F | 1,000 | 0:00:34.258 | 8,90 | 87,6 | |
| 1903289 | G | 1,379 | 0:00:43.158 | 2,98 | 120,8 | |
| 2034705 | H | 1,712 | 0:00:46.138 | 2,40 | 150,0 | |
| 2140521 | I | 1,404 | 0:00:48.538 | 2,44 | 123,0 | |
| 2248045 | J | 1,317 | 0:00:50.976 | 3,64 | 115,5 | |
| 2408466 | K | 0,743 | 0:00:54.614 | 4,61 | 65,1 | Tempo 1.Stanza |
| 2611558 | L | 0,732 | 0:00:59.219 | 5,61 | 64,2 | 97,1 |
| 2859008 | M | 1,409 | 0:01:04.830 | 4,37 | 123,5 | |
| 3051856 | N | 1,454 | 0:01:09.203 | 2,83 | 127,4 | Durata 1 |
| 3176446 | O | 0,000 | 0:01:12.028 | 0,12 | | 55,61 |

After listening and marking the 214 performances I could establish a tempo deviation graph for each performance. I chose to divide my material in four groups according to the different stages of recording technology; the acoustical period 1895-1925, the electrical period 1926-1955, the stereophonic era 1956-1895, and the digital era 1985-2005.

There are big individual differences, but the deviations follow a pattern. Taking the arithmetic mean for each period we got a very clear indication of the tempo deviations within the song.

Figure 4 (Tempo deviation in the sections, means for each era)



There is a considerable change in performing section 2 and 4, which are the two piano interludes between first and second verse and between second and third verse. These tempo deviations show that the accompaniment was made faster than the singer's tempo in both the acoustical and electrical period, and it became slower in the second half of the century. This change might be interpreted in different ways: It ca be argued that the accompaniment became an important deliverer of musical thought in the second half of the century, while in the first part the interpretation of the melody alone (from the singer) was most important.

Even if there here is a constant development from the acoustical to the digital era, it cannot be characterised as a process of tidying up performances, because the deviations are on both sides of the normal tempo. This data is collected from the performance of the first stanza, but a comparison with the second makes no significant change, except the peak note in bar 16 (section K = 10), which will be even longer.

This profile of deviations seems to be very stable tested with parameters other than the recording date, such as the voice, repertoire, age and nationality of the singer, the language, the type of accompaniment. It is unaffected by the difference of chosen form elements.

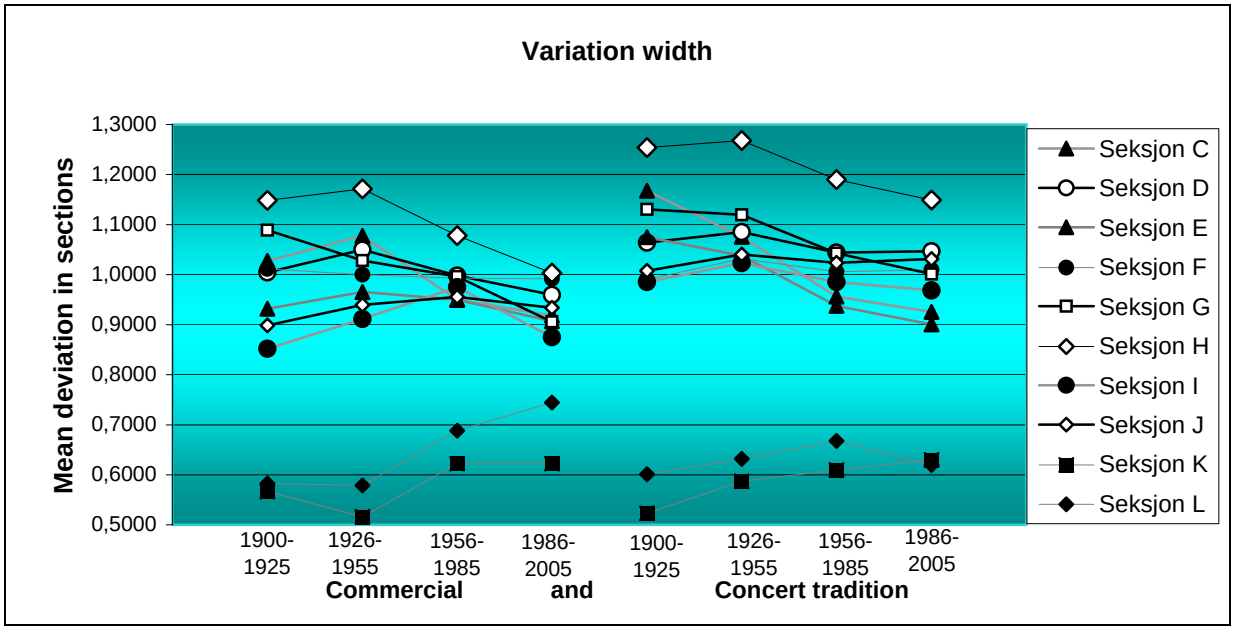
Analysing the 214 recordings I found it necessary to divide the performances in two categories; belonging to either the concert tradition or the commercial tradition. I see these two as opposite sides of a continuum of interpretations, and in my material 25% of the recordings were classified as belonging to the commercial tradition. A comparison between the different deviations in these two groups shows clearly a statistical significance. If we split the material down to each section we get these results when we compare these two traditions:

| Section: | C | D | E | F | G | H | I | J | K | L |
|---|---|---|---|---|---|---|---|---|---|---|
| Z-value | -1.050 | -2.773 | -1.416 | -.955 | -2.919 | -3.669 | -.2.491 | -3.639 | -.942 | -.157 |
| Significance | *.294* | *.006* | *.157* | *.340* | *.004* | *.000* | *.013* | *.000* | *.346* | *.875* |

There is a significant difference between the two traditions performing the lyrics in the 2.and 4.verse and in the second half of the fifth verse. It was somewhat surprising that there were no significant difference at the top point, sections K and L. This means there was no big difference between the two traditions with respect to holding the last high notes longer than indicated by the score (actually the opera and the musical singer make the same kind of extension).

When I grouped these data for the two traditions in the four recording periods I found that the variation width was larger in the concert tradition than in the commercial tradition. It can be illustrated like this:

Figure 5



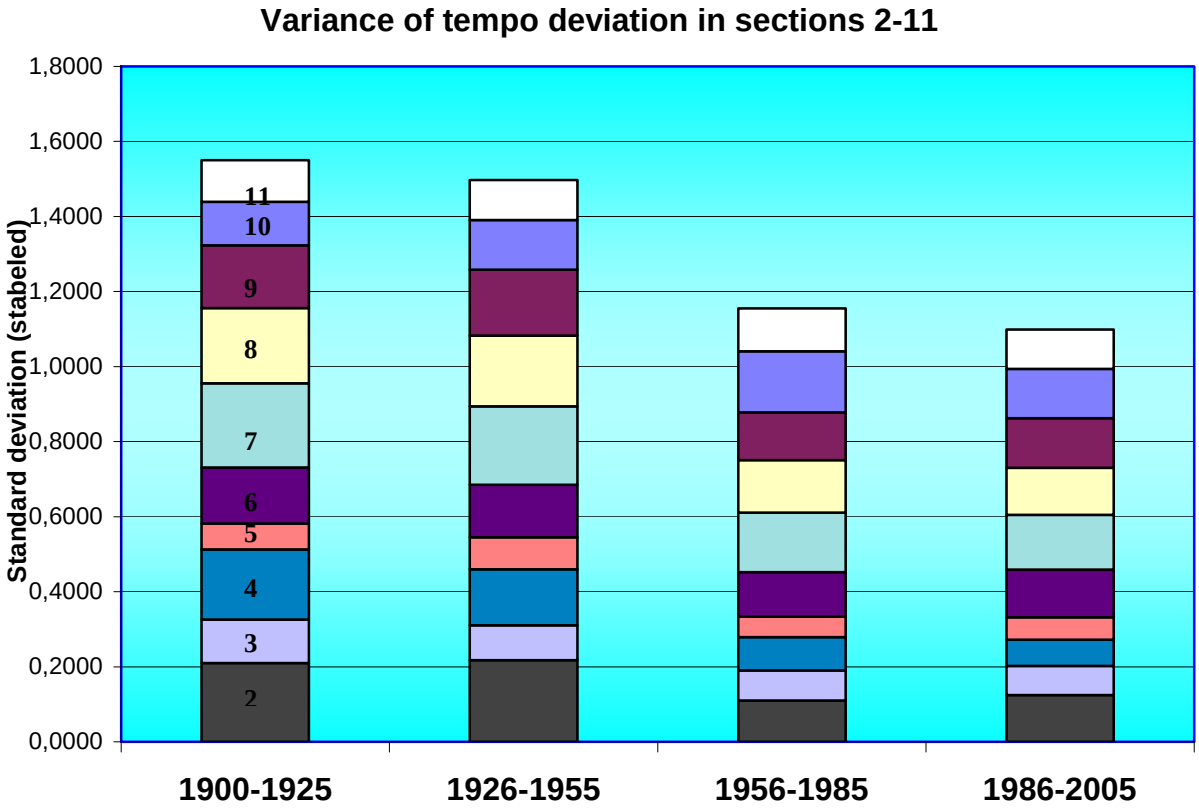

This might indicate that the commercial tradition is more streamlined and do not appreciate the individuality as much as in the concert tradition.

There is however some hints indicating a tidying up of performances in this figure as deviations are becoming less and less through the century. In addition to those elements Philip addresses in his statement about the tidying up process, (that was ensemble became more tightly disciplined; pianists played chords more strictly together, and abandoned the old practice of dislocating melody from accompaniment; the interpretation of note-values became more literal, and the nature of rubato changed, becoming more regular and even,) I wanted to see if a process of tidying up performances could be measurable when focused on the tempo variations of performances.

So the next thing for me to do was to calculate the arithmetic mean and the standard deviation for each section, grouped in the four different stages of recording technology; the acoustical, electrical, stereophonic and the digital era. Then I linked the data from each section together to get a total of the standard deviations for each era of the recording technology. This total will show us the range of variance of tempo deviations in the performances in each period and a decline would indicate a tidying up of performances.

Using the data from my 214 different recordings of Jeg elsker Dig! I finally found what I was looking for:

Figure 6




The decline in the total of standard deviations from the sections in these four groups of the century is continual, and this gives a completely different picture than my first figure showing the tempo variations as duration data for each performance in the whole century. The sudden fall from the second to the third period might indicate that from the 1960's recordings became more used by musicians in their study of repertoire and performance practices.

To sum up: By defining the tempo in the first verse line as the basic tempo of the interpretation, I could calculate the deviations for each singer's performance and get a deviation profile of the whole song. In addition I could compare deviations in each section in all recordings independent of their basic tempo, and thereby link these profiles with all other background data. Then I calculated the arithmetic mean and the standard deviation for each section and grouped the result in accordance with four eras of recording history. Finally I linked the data from each section together to get a total of the standard deviations for each era finding the variance indicating a tidying up of performances.

Therefore I would be very interested to see someone else would do a similar analysis of another piece of music, so that we could have more data on the tidying up of performances. I hope this presentation has shown one way to find musicologically interesting data derived from recordings, and by using quite simple statistics engender a wave of possible explanations.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