Identify if there are characteristics that might signify revolutions (major leaps) in musical evolution from these data? What artists represent revolutionaries (influencers of major change) in your network?

问题e的解决方案：

注：各年发歌数分布图（所有流派）

这段主要是Vocal和Jazz相似的分析

From Graph1 & Graph2, we can identify that different genres take their major leap at different times. For example, Pop/Rock became popular in 1960s, while Vocal and Jazz reach the peak in 1950s. What’s more, the curve of Vocal and Jazz are of similar type. In consideration of Pearson correlation coefficient, Jazz is similar to Vocal. In addition, many active vocal singers in the 1950s have close links with Jazz. For example, Ella Fitzgerald (ID:184502) was called Queen of Jazz, while Frank Sinatra (ID:792507) was regarded as an idol by many jazz singers.

分析什么因素的变化使得Vocal在50年代流行起来/发生变革

From Graph2, it is clear that Vocal took its major leap around 1950. According to Graph3, the attribute acousticness started dropping, which means the spread of microphone and the improvement of recording technology, when Vocal became popular. Considering the characteristic of Vocal, refers to the singer who takes his own singing talent and singing skills as the selling point, the change of acousticness offers Vocal singers  much room to exercise their talent in developing a softer, more personal and more subtle style. In return, Vocal came into fashion.

找出代表性歌手

From Graph4, there were many representatives from the 1930s to 1960s.然后从下面几个里面找出他们对Vocal内部影响力比较大的数据+作图！

从各个流派在不同时期发布的歌曲数目，可以大致看出，各个流派在不同时期的活跃程度。如果某个流派在某一时期内的歌曲数量明显增加，我们可以认为该流派在这一时期发生了major leap，从图2中可以看出在50-60年代，Vocal和Jazz得到发生了蓬勃发展，同时也可看出二者的发展曲线非常相似。在50-60年代活跃的Vocal歌手中，较为著名的有被称为Queen of Jazz的Ella Fitzgerald（id184502），以及被许多爵士乐视作偶像的Frank Sinatra（id792507），也足以看出Vocal和Jazz的相似度较高，同时两个流派间的影响也较大。

再结合Vocal的音乐特征随时间变化的特点，不难发现，在Vocal系开始流行的时期，acousticness开始显著下降。结合历史，不难发现，在50-60年代随着麦克风的普及&录音技术的改进，正好让现场表演型歌手得到了更多发挥空间，发展一种更柔软、个人化和细腻的风格，使得Vocal系快速发展。

从图3中可以看出，Vocal流派的代表性歌手在30-70年代都不乏有代表性且高产出的歌手，他们（此处结合影响力进行分析）影响了Vocal系内的其他歌手，故他们代表了influencers of major change