Chapter 11: Audio Engineering and Soundwriting in an Interdisciplinary Course

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1. Sample Listening Journal #4 by Rebecca Waldron

This "Listening Journal" writing sample by Belmont student Rebecca Waldron is in response to prompt #4.

Listening Journal #4

In 1986, Dire Straits' album *Brothers in Arms* won the Grammy award for Best Engineered Album, Non-Classical. The album was engineered by Neil Dorfsman and produced by Mark Knopfler. While there are many well put-together tracks on this album, the third track, titled "Walk of Life," is the one I will be focusing on. I will be using Audio Technica ATH-M50x headphones to listen to the song, which is an AAC audio file that was taken from the CD and downloaded into iTunes. The album I am using for this song is not a remastered one. It is an original copy of *Brothers in Arms*. One of the reasons I chose to focus on this song in particular, versus all the other songs featured on the album, is due to the different attributes of the song like the spatial characteristics, spectral balance, the dynamics, and the technical aspects.

The spatial characteristics of a song are made up of three general categories: horizontal, vertical, and depth. These categories help to create the acoustic environment of the source by altering the perception of the location of sound. One can affect the horizontal characteristics of a song by using panning, the vertical by altering frequency, and the depth by applying things like reverb and delay. The panning affects where the instruments are placed within the song. In "Walk of Life," the vocals seem to be panned center since they are balanced between both of the ears of the headphones, and the background vocals seem to be panned a little to the left since they appear to be a little louder in the left ear. It sounds as though the guitar is panned to the left, as well, the synth is panned slightly to the left, the kick drum is panned to the middle, and the shaker is panned to the right. The only area of reverb that I can really hear is the short burst right after the kick drum is hit and a little bit on the shaker. There is not an insane amount of reverb placed on the vocals, which helps them blend with the instruments and sound natural. The depth of the song seems to rely mostly on volume. The guitar and synth are the most prominent instruments, which causes the song to sound a little brighter.

Spectral balance is one of the types of timbral attributes to a song. It is an audio signal's frequency and the power of each frequency throughout the audible range of frequencies, which is 20Hz to 20kHz. It is the overall balance of frequencies throughout a song, meaning how each range of frequencies compares to the others. When doing a spectrum analysis, one must listen to the different ranges of frequencies, typically listed as low, mid, and high, to determine which range is the most prominent. The song "Walk of Life" is a very mid to high frequency heavy song. While the kick drum is present throughout the song, it is not prominent. Other than the vocals, the loudest tracks featured in the song are the guitar and the synth. Due to the high frequency of the synth that is played during the entire song, the guitar that is played at a mid-range of frequencies, and Mark Knopfler's vocal range, I believe that the song is very mid to high frequency-dependent. The kick drum is not extremely present, and there is not a heavy presence of bass being featured either. The kick drum is most notable within the first minute or so of the song, but afterwards it is a little drowned out by the other components of the song.

Dynamic range consists of the difference between the loudest and softest parts of a signal, ranging from 0dB SPL at the threshold of hearing to 140dB SPL at the threshold of pain. The ways that dynamic range is usually altered are through adjusting the fader level and using some form of dynamic processing, like compression, limiting, and gating. The use of compression can sometimes make a song sound a little unnatural, or aggressive. There is not an overly excessive use of compression in the song "Walk of Life." There are times when the song does sound a little thin, but, overall, the song's dynamic

range is well-balanced. I am unable to distinguish any clipping or distortion within the song, and it is not heavily compressed which allows for it to sound a little more natural than other songs released today.

The lack of clipping and distortion within the songs also benefits the technical aspects of the song. One typically considers the technical aspects of a song to comprise things like distortion, noise, polarity issues, and the reversion of L-R. There is no issue with the polarity of my copy of the song, or the medium through which I am listening to the song, so in respect to polarity, the song is not being affected. The type of noise within the song is similar to what a performer would use for artistic effect, meaning it is in the song almost intentionally. However, there is a little bit of noise that comes from the hit of the kick drum mixing with the sound of shaker, almost like a click that is full of high-frequency energy, but it is not defined enough to deter from the overall sound of the song, or the individual elements of the song. There are no pops from any vocal plosives or any low-frequency sounds, or hiss caused by white noise, that distract from the sound of the song either.

The majority of the song is free from different technical anomalies and issues that are created through dynamics. The song has a good spectral balance, as well as a good spatial horizontal balance. Other than the few clicks that are formed due to the interaction between the kick drum and the shaker, the song is very well put together. It is altogether well-balanced in almost all of the different elements, and there are no issues that take away emphasis from the song. There are a few problems within the song, but they are not excessive enough to detract from the overall sound of the song.