

LIGHTMOTIFS:
GRAVITY, LEITMOTIF, AND LIGHTING DESIGN IN WAGNER'S *DAS RHEINGOLD*

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Lightmotifs: Gravity, Leitmotif, and Lighting Design in Wagner's *Das Rheingold*

Swimming towards the surface of the Rhine, the prologue to *Das Rheingold* pushes against gravity in a futile attempt to resist fate. Built from the stable bottom of the Rhine up to the ever-changing currents of the river, constant motion in the score floats over a bass pedal to create the illusion of a flowing river. Growing faster and more intricate as time passes, the listener swims upwards through the gradually brightening water until the Rhinemaidens and the home of the Rheingold comes into view. Light becomes an essential part of this scene-building as we evolve from the dark depths of the river upwards to where the music and light bounce off each other in a constant flurry of movement, resisting the constant pull back to the depths of the Rhine. Represented in both the score and the lighting, *Das Rheingold* creates an environment in which even gods cannot resist falling to the tides of inevitability.

Having such a strong connection between score and staging, the prologue to *Das Rheingold* offers an ideal case study for how music analysis can inform a lighting design. From the prologue's unconventional form to Wagner's descriptions of staging to its length, all these elements only heighten the interesting parallels we can draw between the music and light. Within Wagner's oeuvre, especially the Ring Cycle, there are a variety of other moments where sensitivity to the score can enhance lighting design. Coming from just *Das Rheingold*, the first introduction of the Rheingold shortly after the prologue and the rainbow bridge to Valhalla stand out as remarkable moments where interesting use of light is essential. From the "brightening glow" of the Rheingold bouncing off the waters of the Rhine, to the hammer strike and progression up the rainbow, staging and score must line up perfectly to create the sense of these

elements happening as if by magic.¹ This paper seeks to take the first of these examples, the prologue, and use it as a model of how in-depth musical analysis would serve to enrich lighting in scenes where music and staging are so deeply intertwined.

To examine how the interplay of music and light works in the larger motion of the piece, I found it best to first chart the trajectory of the prologue. In looking at the scope of the work, it can be sorted into four main phases. Each phase represents a different wave cresting into the next section, each phase brings the listener deeper into the layers of motifs or figures used in the opera as we swim upwards into the domain of the Rhinemaidens and into the Ring Cycle itself. Color in the chart also draws the viewer from the dark depths of the river to the rushing rapids at the surface of the river. The darkest colors represent a tonic pedal, with other stabilizing elements like the fifth in the bassoons coming in only slightly lighter give way to increasingly lighter upward figures. This culminates with the lightest bars of the chart as the piece bubbles up to the highest elements at the top of the Rhine. In between lie the gradual ebb and flow of the tide of the piece struggling to get to the surface only to be drawn back by the weight of the water above.



Figure 1 – Layers and Phases of the prologue of *Das Rheingold*

¹ Richard Wagner and Andrew Porter. *The Ring*. Translated by Andrew Porter. London: Dawson, 1976.

Phase 1 - The Bottom of the Rhine

Starting with the first phase, the river's depths come into view on a single pedal note upon which the rest of the prologue will be built. In a typical opera, we are used to a bright overture that walks the listener through all the songs they will come to know in the work. Wagner instead teaches us the building blocks for the entire Ring Cycle in a far more subtle way. In starting the prologue with just a single note, the repeated figures and leitmotifs that enter after are easily brought to the forefront without competition from the bass line. From the shimmering fifth between the basses and bassoon, we get the first upward figure in the low horns which then gets then doubled in the higher horns, bringing the wave to a crescendo.

We can begin to explain this wave-like motion using Steve Larson's theory of musical forces, especially his concept of gravity.² This force pulls musical lines downward to the note that "feels right" or like a logical conclusion to the listener, creating a sense of a push and pull toward structural tones and members of the tonic triad can be palpably felt in a piece of music. But how does this function in a piece where we start at the depths of the Rhine river, straining to see the light filtering through the surface far above? To tackle this, I want to propose the idea of weightlessness or suspended gravity. Created in the surge of upward swells of music cresting and crashing back down to the ground, the physical properties of a wave hitting the shoreline can be replicated in a piece of music. While not as heavily affected by gravity in the movement upward, gravitational forces act all at once as the motive reaches its peak, pulling it immediately down. The suspension of gravity in the prologue also serves as a force to drive the piece forward.

² Steve Larson, *Musical Forces : Motion, Metaphor, and Meaning in Music*. Bloomington: Indiana University Press, 2012.

Knowing that a line cannot move upward forever, the listener anticipates the moment of return to the bottom of the line as much as they would anticipate that same low note had we started higher and felt the gravity pulling us down to resolution the entire time.

Looking back to the horn entrance in the first phase, we see the introduction of the nature leitmotif as well as the first instance of suspended gravity. Similar to the feeling of jumping in water, the time it takes for gravity to pull down on the upward line of the motif is slightly slowed. This leads to the feeling of suspension or weightlessness, with the listener getting buoyed up towards the surface only to be knocked back by the tide time and time again. Adding to this, the very structure of the nature motif itself reinforces the gravity that acts upon it. Consisting only of notes of the tonic triad, Wagner uses the fundamental and pitches of the overtone series to evoke the powerful concept of *Urnatur*, which reflects the idea of an original source of nature. Aligning with such a primal source, the motif calls back to the very genesis of the world and the simplicity of the harmonic series that underlies all of what is to come in the following opera. Even as more and more layers and motifs begin to stack upon each other and Wagner starts to play with the motifs, the pitches of the tonic triad ring through, grounding us in the natural world in which the operas inhabit.



Figure 2 – The Nature Motif

So, given the evocation of light in this prologue, how should a lighting designer communicate and support the score? As designers our job is to help tell the story of the work

through both practical and narrative elements. Practical concerns for lighting revolve around the visibility of the actors and the environment. But past this basic requirement, the possibilities for storytelling through light are limited only by the designer's vision. In designing for a staging of *Das Rheingold*, the interpretation laid out in the first portion of this paper could greatly enhance the lighting choices made for this section, aligning them with the trajectory of the music and the soundscape that Wagner endeavored to create in the prologue.

Even before we look at the score and analysis' potential as signposts for lighting, Wagner's staging directions make the intent for the prologue clear:

At the bottom of the Rhine (Greenish twilight, lighter above, darker below. The upper part of the scene is filled with moving water, which restlessly streams from right to left. Toward the bottom, the waters resolve themselves into a fine mist, so that the space, to a man's height from the stage, seems free from the water, which floats like a train of clouds over the gloomy depths. Everywhere are steep points of rock jutting up from the depths and enclosing the whole stage; all the ground is broken up into a wild confusion of jagged pieces, so that there is no level place, while on all sides darkness indicates other deeper fissures.) (The curtain rises. Waters in motion. Woglinde circles with graceful swimming motions around the central rock.³

As a lighting designer, the direction for a "greenish twilight, lighter above, darker below" immediately stands out. When thinking of water, green feels like an unnatural choice, blue being far more conventional option. But our expectations are subverted from the start, with the open fifth in the bass and slow build of the prologue on top of the greenish tint to the water. In turning our preconceptions on their head, a new expectation for breaking boundaries becomes a cue for how the scene should be lit, in both color and convention. Where in a typical opera, the curtain is

³ Richard Wagner and Andrew Porter. *The Ring*. Translated by Andrew Porter. London: Dawson, 1976.

often down for the entirety of the overture, only lifting for the grand reveal of the set and actors as the next piece begins, Wagner begins with lights on an empty stage. Finding ways to make the static scene of the Rhine interesting while also supporting the music of the prologue becomes an incredibly important task for the lighting designer. As we move through the four stages outlined above, the score takes on new levels and parts of the Rhine and light must answer to the ever-shifting motifs that characterize the section.

In this first phase, simplicity in the orchestral texture calls for simplicity in the lighting design and keeping the two elements balanced; otherwise lighting would detract from the music it is supposed to support. This suggests starting in almost complete darkness, with only a small shimmer of light allowed on the lower half of the stage, implying the light bouncing off the bottom of the river. To begin to capture Wagner's direction of water streaming right to left, slowly shifting the intensities of the lights in a chase would provide the feeling of motion without invoking a coursing river. Pulling from the idea of suspended gravity, the swells in the music should match the intensity of the lights, with the top of the leitmotif corresponding with the brightest moments in the lighting. If the original directions are to be followed, this light will be a dark green and interact with the fog that floats on the bottom of the stage. In modern productions, the fog often is left out and blue is used as the primary color instead of green, but the lighting concept of minimal movement in time with the nature motif remains the same.

Phase 2 – Swimming Upward

As the listener continues to rise and fall with the waves of the nature motif, the bassoons take over as Wagner begins to use the fundamental series in the horns as a supporting line. The previously established upward figure of the nature motif in the horns turns downward as the

horns repeatedly leap up only to be pulled down by the gravity of the piece. Weightless, the horns make the jump of an octave and a fifth, but as the line moves upward towards the peak of the wave far faster, so does gravity. No longer suspended, the downward line is pulled quickly down to the base of the river, only to attempt to defy gravity once more.

Played a bar delayed from one another, each one of the three notes of the tonic triad as well as the tonic in octaves are equally present in the combined lines of the first four horn parts. Having all of the notes of the triad constantly present in root position lends strength to the structure of the introduction, further stabilizing the base of the Rhine as we slowly float up towards the surface of the river throughout this section. Horns 5-8 double this pattern, but at twice the speed, further establishing the base that the rest of the piece sits on as it progresses. The shift from the slowly rocking motion of the nature motif we have seen up to this point to the doubled pattern of the lower horns represents the first of the two larger shifts in time and speed that characterizes this section. Moving from the stable four bar phrases the listener has come to expect from both the nature motif and the downward nature figure in the horns to a faster two bar phrasing of this same motif, we feel a physical shift in how the watery landscape around us has shifted. From placid with slow movement at the depths to the beginnings of light beginning to trickle through the water, even as the horn line pulls downward, the bassoons continue the upward push towards the light.

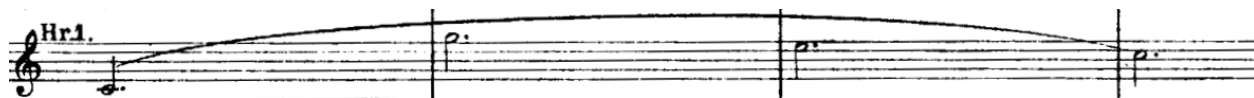


Figure 3 – Downward Nature Motif in the Horns

attempting finally escape the pull of the water. But even this figure is eventually pulled down; suspended gravity is in effect as the figure moves up and then quickly sinks.

As we swim upwards towards the top of the Rhine, more light and color can seep through the depths. With the introduction of the Rhine motif, both the lighting and the score can take on a faster and more intricate approach. If the designer adds more motion and lighter colors towards the lower middle section of the stage as seen from the front, a sense of motion and upwards movement will be amplified. Having the second group of lights ebb and flow with the contour of the Rhine motif, the line's rise away from and fall back to the tonic can be represented visually as well as aurally. This slow rise in intensity also allows for the entry of the low flutes with the nature motif halfway through this phase to act as a guidepost for the music and as a halfway marker for this portion of the lighting. This halfway point is met by the Rhine motif as it filters through the musical texture like a beam of light pushing through the depths as the music, the tessitura of the flutes giving the listener an idea of what the top of the river looks like.

Phase 3 – Light Breaks Through

Another moment of suspended gravity comes from the clarinet line as we enter the third phase. A faster version of the nature motif, this figure in the clarinets is not only metrically faster than the previous upward figures, but also serves to create a denser instrumentation as we move towards the climax of the piece. Adding to the low voices that entered with the flutes in the previous passage, as each new instrument enters, the sonic landscape of the Rhine grows more complex and lush as we push towards the surface.



Figure 5 – Nature Motif 2

Building the number of instruments playing at a time speaks toward the larger motion of the prologue, contrasting the feeling of swelling waves and gravitational pull down against building upwards to a peak by creating a denser and denser soundscape. In the combination of these two guiding themes, that the listener gets immersed in the struggle against nature and the inevitable whims of fate that we will see play out as we enter the first of these operas. Doing so evolves this very placid soundscape that we had to begin and brings it into a new level of light and movement, giving it the sense that we are moving upwards to reach the heart of the motion and life in the river. Further supporting this, we have the cellos beginning a 16th note figure, an elaborated version of the Rhine motif, that speeds up the rate of motion of the work and how quickly the waves are cresting and falling.



Figure 6 – Elaborated Rhine Motif

Doubling the rate of the note values again, this new version of the Rhine motif serves not only to push faster us towards the surface, but also to nest inside the modified nature motif we

see in the clarinets. With the two two-bar phrases fitting into each other, they fit nicely inside of the larger four-bar phrases presented in the original Rhine and nature motifs, while also receiving support from the offset downwards nature motif in the horns. Even at this faster rate, the tonic triad is always consistently represented through the various layers of the music, offering a look into the different depths of the Rhine as we get closer and closer to the light at the surface. We swim ever nearer to the shimmering surface of the river as the Rhine motif is picked up by the violins. Taking it up into a higher version sixteenth note figure, the ripples and waves towards to the top of the body of water come into focus on a background of the larger tides and movement from below.

To light this phase, the third section of the Rhine will come into focus with the gradual addition of more fixtures, reflective of both the greater number of instruments playing and the more rapid movement of the lines played. With the accelerated rate of motion in the music and light, the current towards the river's surface, and how light interacts with water in motion, can be captured. This also serves to help drive the prologue towards the final phase, with the motion of light working in tandem with the sixteenth note figure to push an otherwise static set and bassline. Incorporating the lightest greens up to this point, the audience gets the sense of beams of light flitting through the water as we reach the upper half of the stage. This gradual upward shift is interrupted by the final entrance of the phase.

Piercing through the orchestral texture at the end of this section, the trumpets pull us out of the depths of the Rhine with a bolt of bright light filtering through the murky waters of the river. Accompanied by a downward figure in the bass trumpet, the highs of the trumpets feel higher as they resist both the pull of gravity and the lines inside their own section. While this line can only suspend gravity for so long, the strident tone of the instrument pierces through the larger

orchestral texture of the work and heralds the movement towards the final section of the prologue.

Phase 4 – Into the Light

Fully emerging into the light, the only new motivic material in this final section comes in the form of an upward scalar figure. Simply pulling the listener upwards in a major scale, the natural feeling of the prologue is retained while giving the piece momentum and driving toward the climax of the prologue. Only using a couple of instruments to create this push while retaining the key motifs in others, the base of the river and all of the waves above continue to be visible even as the scalar line breaches the surface of the water. With instruments ranging from the lowest to highest registers doing the lifting, voices from every part of the river’s soundscape serve to unify the sprint towards the surface, giving the listener the feeling of the entire river rushing forward at the audience to meet the entrance of the Rhinemaidens following the prologue.



Figure 7 – Scalar Figure

With the surface of the Rhine in view, Wagner brings in all of the dazzling color of light breaking through the surface. This effect creates an aural kaleidoscope of shifting motifs and textures, all bouncing off of each other to create the full effect of the ever-changing landscape of a river. Even at this level, gravity continues to work against the upward motion of the piece. As the scalar figure climbs up, so too does the gravitational pull that enacts upon it. This creates the

shortest suspension of gravity in the passage, only holding out for a bar before sinking back down to the bottom of the scale only to rise up once again. Having this rapid rise and fall of the scale in 16th notes, the surrounding material in two or four bar phrases seems to speed up as the smallest waves at the surface stir up the river from the floor to the surface of the water. Even the range of the scale, an octave plus a third, gives the sense that the resolution of the section is yet to come, with the higher tonic our ears are looking for just barely out of reach and the one below just barely overshoot. Buoyed by all the leitmotifs before it, the scale neatly nestles into the prologue's motion as it brings us towards the work's climax. So too, should the lighting bring a feeling of a shimmering, shifting prism that sits atop the rest of the Rhine that has been built below it. With the color at its palest and light at its brightest, the final phase rests as a brilliant jewel of perpetually moving light, flitting down to touch the depths of the river and setting the stage for the first scene of *Das Rheingold*.

Lighting the Way for Future Scenes

While the prologue stands out as a wonderful example of music and light interfacing with each other, it is far from the only scene in Wagner's repertoire, or even the Ring Cycle that calls for this type of communication. In the greater cycle, moments with fire also need to capture both the magic of these later scenes as well as the grand sense of nature that the prologue invokes. Loge's fire and Wotan's control of fire in the magic fire scene at the end of *Die Valkryie* serve as an excellent continuation of using analytic tools to heighten lighting design. In the dichotomy between Loge's fire and the waters of the Rhine emerges a shared link in how Wagner portrays the all-encompassing feeling of *Urnatur* in both staging and score.

Reflecting Loge's fire, a natural and unrestrained version of fire, the score reflects a flame, chromatic and rising with the heat. Sitting above the strings, the flute line flickers in and out like a wavering flame, sputtering out as the flutes cannot suspend gravity further, the downward line taking over. Loge and his fire fall to gravity and give in to Wotan's will; the light of a roaring fire is reduced to cinders. This natural spark is later fully taken over by Wotan when he calls upon the magic fire to surround Brünnhilde.

Starting with the leap and gentle fall into unconsciousness from the sleeping motif, the forces of gravity, especially in such a small suspension, weigh heavily on this scene. This is only made even more pronounced when brass instruments announce the fate and magic spear motifs. Fate attempts to resist gravity, but only in the small movement upwards at the very end of the motif does it see a return to its starting pitch. Wotan's spear however, serves as the executor of fate and gravity, with the downward scale of the motif a mirror image of the upwards scalar motif at the end of the prologue. With the forces of fate pushing down on this scene, the spear motif drives the narrative down upon Wotan as he calls on Loge's fire to encircle Brünnhilde as she sleeps. From the dense and strident tone of the brass comes the magic fire motif. Heralded in the piccolo and high strings, this twinkling line is a far cry from the block chords in the brass moments before. This bright feeling in the high winds speaks not only to flickering tendrils of flame, but to the artificial nature of the magic fire. In contrast to the all-consuming might of Loge's flame, this ring of fire is carefully controlled. A lighting designer should consider the stark contrast between the fire in the first half of the scene and the magic fire as Brünnhilde sleeps, which emphasizes Wotan's control over this artificial fire. I envision a large wash of warm colors, each moving erratically and in response to the various motifs interwoven in the section, which could play against a smaller set of fixtures lightly flickering in sync with the

predictable motions of the piccolo line. The lighting should reflect the disparity in intensity between a blazing wildfire and a warm campfire, exemplifying Wotan's control over an element that previously seemed untamable. This intimate connection between music and light lends itself to a new form of musical analysis, one that offers analytical methods as a lens to inform lighting decisions.

In the Ring Cycle, this connection highlights the larger ideas of fate and nature that guide the cycle. But Wagner's works are far from the only operas that this lens could prove an insightful viewpoint into. Verdi's operas contain some of the same elements of control Wagner exerts over his works: the staging manuals he wrote were among the first to direct designers and directors to the specific choices he wanted. Similarly, the central themes of Verdi's oeuvre could translate into lighting choices that would reinforce not only the lighting, but also the audience's perception of the narrative as it unfolds. While exploration of works outside of Wagner's realm sit outside of the scope of this paper, the promise of greater communication between musical and design aspects of opera could only benefit the productions we see on stage today. Seamlessly interacting with one another, lighting and music could present a solid foundation for how an audience will interpret an opera. From the flickering flames of Loge's fire to the fathomless depths of the Rhine, the link between the two intangible elements of opera, light and music, bring the opera's central themes to life.

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