The Sound of Krautrock

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In terms of musical style, the sizeable catalogue of music that falls under the label of Krautrock is as diverse as it is experimental. The instrumentation of Krautrock groups ranges from soloists surrounded entirely by synthesisers to standard rock formations of vocals, guitar, bass, keyboard, and drums. Krautrock songs could be shorter than the average pop hit, or take up an entire side of a vinyl record. Some critics have drawn comparisons between the genre and psychedelic, acid, punk, progressive, and art rock on the one hand, while others insist that it 'owe[s] more to the avant-garde than to rock & roll'. In short, when it comes to musical characteristics, Krautrock is all over the map.

The sheer diversity of this genre can be seen, for instance, in a comparison of two pieces that, despite being markedly different, are both widely regarded as quintessential examples of Krautrock.² On 'Part II' of Tangerine Dream's classic 1975 album *Rubycon*, the track begins with a low, oscillating drone, not unlike the sound of an air raid siren that has been slowed down and set to play in an endless loop. Hollow electronic pitches weave in and out of the sonic fabric, seemingly conversing with a series of metallic hits before being drowned out by a dissonant, undulating synthetic choir. This nightmarish soundscape develops for nearly five minutes, finally giving way to a rhythmic sequencer that signals the next large section of the seventeen-minute piece, which comprises the entirety of the second album side.

By contrast, Can's 'Halleluwah' (*Tago Mago*, 1971) opens with a rhythmic, repeated bassline and a tight, funk-like drum beat on an acoustic kit. The guitar alternates between syncopated chords and long, drawn-out pitches, making ample use of tremolo, while vocalist Damo Suzuki sings nonsensical lyrics over a melody derived from the classic blues scale: 'Did anybody see the snowman standing on winter road / With broken guitar in his hand, onion peeling sleepy eye?'

¹ Kraut Rock, All Music, www.allmusic.com/subgenre/kraut-rock-ma0000002687?1626735447443.

² The Ultimate Krautrock Playlist, NME, www.nme.com/blogs/nme-blogs/the-ultimate-krautrock-playlist-47357.

The difficulty in pinning down a specific 'sound' for this diverse body of music can be traced to the history of its development. Krautrock came into existence as the result of a larger cultural movement in West Germany. Since the end of World War II, West Germans had grappled with forming a German identity not tied to their Nazi past; on top of that, American popular culture had become a dominating force, often overshadowing the elements of German cultural heritage that were still acceptable in the wake of the Third Reich's cultural appropriation.³

Moreover, throughout the late 1950s and 1960s and culminating in 1968, younger generations of Germans began protesting with increasing vigour against the perceived ills of their government, believing that the Federal Republic was 'constantly threatened by the re-emergence of the Third Reich and by the possibility of a new world war and genocide'. Musicians were heavily involved in this period of social upheaval. In addition to direct participation in these protests, artists began to search for a new sound, striving to break away from 'bad German Music and imitations of American music', in Dieter Moebius' words, and create music that reflected the new Germany. In other words, Krautrock was initially better defined by what it was *not*, rather than what it specifically *was*. Krautrock musicians began to abandon the characteristics of both Anglo-American popular musics such as beat and rock 'n' roll, and the prevailing German style of the time, *Schlager* (literally, hits), endeavouring to create something 'new, special and most of all original'. 6

This originality took many forms. Klaus Schulze, Tangerine Dream, and Ash Ra Tempel often created music that featured primarily electronic instruments, experimental recording techniques, and a minimalistic approach to form and harmonies, a style often more akin to a soundscape than a song in the traditional sense. Their style, sometimes referred to as 'Berlin School' or *kosmische Musik*, influenced ambient and New Age genres. In contrast, groups like Kraftwerk, La Düsseldorf, Neu!, and Cluster embraced a sparse, mechanical sound, characterised especially by what came to be known as *motorik* beats in the drums (or drum

³ U Poiger, Jazz, Rock, and Rebels: Cold War Politics and American Culture in a Divided Germany (Berkeley: University of California Press, 2000), p. 1.

⁴ B Kutschke, Anti-Authoritarian Revolt by Musical Means on Both Sides of the Wall, in B Kutschke & B Norton (eds.), *Music and Protest in 1968* (Cambridge: Cambridge University Press, 2013), p. 189.

⁵ D Stubbs, Future Days: Krautrock and the Building of Modern Germany (London: Faber, 2014), p. 336.

O Moebius, Cluster Interview with Dieter Moebius Psychedelic Baby (2 December 2012), www.psychedelicbabymag.com/2012/12/cluster-interview-with-dieter-moebius.html.

machines). The result was a 'hypnotic, piston-pumping' style in which 'drummers pounded out tightly-wound beats, bassists thumped pulsing notes, and zoned-out singers warbled over it all in an absurdist drone'.⁷

All the while, other groups like Guru Guru, Popol Vuh, and Amon Düül incorporated jazz and ethnic musical styles, while Faust and Can used non-musical sounds and spliced tape recordings. In short, while West German musicians of the 1970s largely agreed on a desire 'to put aside everything we had heard in rock'n'roll, the three-chord pattern, the lyrics . . . the urge of saying something completely different', as Jean-Hervé Péron from Faust put it, their idea of what that would entail varied drastically. However, these radically different approaches to newness shared certain characteristics. Krautrock musicians embraced innovative approaches to instrumentation, timbre, the voice, texture, and form, generating a new musical vocabulary that they could call their own.

The Sounds of Krautrock

The musicians involved with Krautrock were heavily invested in sound; the goal of sonic originality informed most of their musical decisions. This began at the initial stage of the composition process. Krautrockers selected instruments that could contribute to an original style: existing instruments were played in an unusual way, while new instruments added a degree of unfamiliarity to the sound. Techniques including sampling, tape manipulation, and sequencing contributed further to Krautrock's foreign sonic character, as did innovative recording locations and methods.

When it comes to instrumentation, Krautrock artists were less focused on the means of making their music than the ends. As David Stubbs points out, it was the 'continued, imitative use of traditional instruments played in the received, traditional rock'n'roll manner that was most inauthentic' to these musicians, rather than the instruments themselves. ¹⁰ Thus, while electronic sounds play a significant role in Krautrock's style, many bands that carry this label used synthesisers and other fully electronic instruments

⁷ D Tewksbury, Tonight: The Merciless Circularity of Beak, Los Angeles Magazine (13 February 2013).

⁸ S Albiez, Sounds of Future Past: from Neu! to Numan, in T Phleps (ed.), Klangtexturen in der Pop- und Rockmusik: Basics, Stories, Tracks (Bielefeld: Transcript, 2003), p. 131.

⁹ D Stubbs, Invisible Jukebox: Faust, Wire 275 (2007), p. 18.

D Stubbs, Why Was the Synthesizer So Crucial to Krautrock?, MHP Books, Melville House, www.mhpbooks.com/why-was-the-synthesizer-so-crucial-to-krautrock/.

in a limited capacity. Indeed, because this technology was both expensive and rare in West Germany in the early days of Krautrock, many groups of the late 1960s and early 1970s used traditional instruments but played and recorded them in unusual ways.¹¹

In addition to a typical rock line-up of guitar, bass, drums, and sometimes piano or organ, Krautrockers incorporated woodwind and brass instruments as well as non-Western sounds. For example, Amon Düül's psychedelic *Paradieswärts Düül (Towards Paradise*, 1970) contains bass, piano, flute, bongos, harp, African percussion, drum set, and guitar, along with solo vocals and choir. Including these atypical instruments served to untether the music's sound from the mainstream rock and *Schlager*.

For the more customary instruments, like guitar, Krautrock groups used unusual playing styles and modified sounds to differentiate their music from pop traditions. Instruments were fitted with contact microphones, effects pedals, and anything else the musicians could use to alter their sound, creating a processed, manipulated timbre that was sometimes so different from the original that it was nearly indistinguishable from an actual synthesiser. The guitar in Neu!'s 'Negativland' (Neu!, 1972), for example, flows between choppy rhythmic patterns, screeching free-noise solos, and distorted drones, building to an aggressive, buzzing wail. Beneath it, the bass and drums play a relentless ostinato pattern that lasts almost the entirety of the ten-minute track, except for a few abrupt stops and restarts, switching between 'off' and 'on' with the cold suddenness of a track being muted.

Though the resulting collage of noise sounds akin to the manipulated electronic works of the classical avant-garde, no synthesisers are listed in the album's liner notes: the personnel merely includes Michael Rother on guitar and bass, and Klaus Dinger on drums, vocals, guitar, and taishōgato (a Japanese stringed instrument). The combination of non-Western instruments and rock instruments played in an innovative fashion allowed Krautrockers to escape the sonic world of the mainstream even without delving into newer electronic technologies.

Despite the difficulty early bands faced in attaining them, electronic instruments would become a hallmark of the Krautrock sound. Krautrock musicians adopted synthesisers and drum machines, relatively obscure as well as expensive (at the time) instruments that provided fertile ground for sonic creativity. Some even created their own electronic instruments, allowing for a fully unique musical voice. Krautrockers now had the

¹¹ Ibid. ¹² Ibid.

tools to generate an entirely new set of sounds that could serve as building blocks for the musical identity detached from tradition they sought to create.

Machine Music

In effect, Krautrock groups like Kraftwerk and Can brought electronic music out of the academic realm, taking inspiration from the experiments of Karlheinz Stockhausen and other contemporary art music composers. The majority of public exposure to synthesised sounds before the 1960s came in the form of film and television soundtracks: the theremin featured in the soundtrack to the alien invasion film *The Day the Earth Stood Still* (1951), the musique concrète of the introduction to *Doctor Who* (1963–present), and so on.¹³ Pioneered in avant-garde art music circles of the first half of the twentieth century, these instruments first became available to the general public in the mid-1960s with the introduction of the Moog synthesiser.¹⁴

The development of the smaller and more affordable Minimoog in 1970 – the first synthesiser to be sold in music stores – resulted in a sharp increase in the instrument's overall popularity, as it was now small enough to store and bring to recording studios or live performances. However, though some Anglo-American rock groups had experimented with synthesisers, they were often played in ways that gave them a similar function to the guitar or piano, rather than in an idiomatic fashion. It was only 'when synthesizers were freed from endeavouring to simulate analogue instruments [that] they came into their own as tools to exploit a broad and diverse field of new electronic sound timbres and textures'. 16

This idiomatic use of synthesisers became a hallmark of Krautrock, from the lush electronic soundscapes of the Berlin School to stark, sequenced patterns and sparse techno-pop. Often, synthesisers and modified sounds took precedence over traditional instruments. Tangerine Dream's eerie album *Phaedra* (1974) was dominated by a Moog synthesiser; the Mellotron, flute, and bass guitar parts were added later, almost as an afterthought. Some bands even forewent traditional instruments

¹³ Albiez, Sounds of Future Past, p. 138.

¹⁴ T Pinch & F Trocco, Analog Days: The Invention and Impact of the Moog Synthesizer (Harvard: Harvard University Press, 2004), p. 53.

¹⁵ Ibid., p. 233. ¹⁶ Albiez, Sounds of Future Past, p. 138.

B Osborne, Game Changer: How Tangerine Dream's 'Phaedra' Set the Template for Ambient Electronics, DJ Magazine (29 July 2019).

altogether, opting for a fully synthetic line-up. Kraftwerk, after an early period of experimental rock, abandoned their flutes, guitars, and drum kits in favour of a wide array of synthesisers, including a Minimoog, ARP Odyssey, EMS Synthi-A, and Prophet-5, as well as electronic drums, vocoders, and sequencers.¹⁸

Like synthesisers, drum machines were a new and relatively obscure addition to the palette of options afforded to Krautrock musicians. While experiments with electronic rhythm instruments dated back to the early 1930s, fully programmable drum machines were not introduced to the market until 1972 with EKO's ComputeRhythm. However, drum machines only became a staple of 1980s electronic music with the introduction of the Roland TR-808. ¹⁹ Just as synthesisers provided the opportunity to explore new melodic and harmonic timbres, these machines allowed for a sonically different rhythm section. They are particularly present on the polished, mechanical side of the Krautrock spectrum, featuring heavily in Kraftwerk's albums.

The spirit of sonic originality was so imbued in many of these musicians that some even created instruments of their own. Amon Düül's Kalle Hausmann, for example, built ring modulators and other custom synthesisers for his performances on *Tanz der Lemminge* (1971) and *Carnival in Babylon* (1972). Kraftwerk are particularly known for their technological innovations; they used a custom-built vocoder for the albums *Ralf & Florian* (1973) and *Autobahn* (1974), and even invented an electronic drum kit with sensor pads, for which they filed a patent between 1975 and 1977. Edgar Froese spoke of creating 'a new musical identity' through creating and modifying synthesiser patches, arguing that

It may sound superfluous, but we're not talking about a musical philosophy – it is more a technical necessity in order to find an incomparable musical basis \dots as a synth player you need to be original, even if you can't make a sound 'better' but make it more original, more like your personal handwriting.²²

This 'incomparable musical basis' was the artistic goal behind Krautrock, and the musicians involved with this genre achieved it through both the use

¹⁸ L Eilers, Kraftwerk: Their Legendary Synths, Sequencers, and Sounds, gearnews, www .gearnews.com/kraftwerk-their-legendary-synths-sequencers-and-sounds/.

A Crute, The History of Drum Machines, MusicTech, www.musictech.net/guides/essential-guide/drum-machines-history/.

²⁰ J Gross, John Weinzierl Interview, Perfect Sound Forever 8 (2008).

²¹ Kling Klang: The Electronic Garden, Aktivität 10 (April 1998).

²² E Froese, L Kay & D Kay, Interview with Edgar Froese of Tangerine Dream by Inquisitor Betrayer, The Rocktologist, www.therocktologist.com/interview-with-edgar-froese-of-tangerine-dream.html.

of new electronic instruments such as synthesisers and drum machines and the transformation of the sound and style of traditional instruments, from standard rock equipment like guitars and drums to orchestral and non-Western instruments.

Vocals in Krautrock

The voice, too, was assigned a different role in Krautrock than it typically served in British and American music, both in terms of its delivery and its use of language. Krautrock singers treated vocal lines more like sound poetry, more akin to progressive and psychedelic rock than beat music or *Schlager*. More attention was given to the way in which the voice was used, rather than the lyrics or conventional talent; the voice served as an avenue for further sonic exploration, rather than a mere medium for lyrical expression.

Can's Damo Suzuki, for example, infused the band's songs with invented words, piercing shrieks, buzzing lips, and guttural groans, often singing with more of a shout than a defined pitch. On top of this experimental use of the voice, vocals were often so thoroughly manipulated that they could be mistaken for a synthesiser; this can be heard in Faust's 'Exercise with Voices' (*Faust Tapes*, 1973), a nightmarish soundscape of processed, wordless vocals rising and falling as various instruments and noises penetrate the texture. Perhaps most famous for innovative vocal timbres among Krautrock groups were Kraftwerk, who made frequent use of vocoders to create a dehumanised, robotic effect. Kraftwerk were among the first bands to feature this technology, which had first been used in the 1971 dystopian film *A Clockwork Orange*; their 'roboticisation' of vocals would have a profound and lasting impact on popular music across the globe.

As with other aspects of Krautrock's sound, vocal style varied widely from one musician to the next. Can's original singer, Malcolm Mooney, sang with a rhythmic, unembellished style, while his replacement, Damo Suzuki, delivered his curious blend of English, Japanese, and invented words with a sense of breathy melodicism. Moreover, many bands did not consistently use a certain style. Faust's vocals, for example, are widely varied. One of their songs, 'Flashback Caruso', comes across as folk rock, with Rudolf Sosna singing Beatles-esque lyrics over a piano-dominated jam session. 'J'ai Mal Aux Dents', in contrast, gives the voice a rhythmic function, with the phrase 'J'ai mal aux dents / J'ai mal aux pieds aussi'

repeating continuously in time with the drums and guitar as Jean-Hervé Péron recites, rather than singing, seemingly nonsensical English lyrics.

Both voice lines are compressed and nasal, and are sometimes balanced fairly evenly in the mix, making it difficult for the listener to focus on one over the other. These songs appear on the same album, *The Faust Tapes* (1973), and are as different from the other tracks as they are from each other. In short, vocal styles varied greatly across the spectrum of Krautrock; however, their function was the same: originality. From atypical melodies and nonsensical lyrics to vocoders and studio effects, Krautrock vocals were performed with a unique style and function, creating another degree of separation between themselves and the Anglo-American and German mainstream.

Sonic Explorations

These were not the only methods Krautrockers used to create a unique sonic signature, however. These musicians were deeply interested in sound itself, and used techniques like sampling, tape manipulation, and sequencing, as well as innovative recording locations and methods, to further differentiate their music from what had come before. In the words of Kraftwerk's Ralf Hütter:

Sound sources are all around us, and we work with anything, from pocket calculators to computers, from voices, human voices, from machines, from body sounds to fantasy to synthetic sounds to speech from human voice to speech synthesis from anything, if possible. We don't want to limit ourselves.²³

Krautrockers' sonic explorations took many forms. It was not uncommon for these musicians to incorporate recordings of themselves crushing glass, hitting sheet metal, and throwing bricks.²⁴ Can's Holger Czukay became known for 'bridging the gap between pop and the avant-garde' through his incorporations of vocals and other sounds from short-wave radio broadcasts, a practice that would pave the way for sampling practices of the 1980s and beyond.²⁵ Likewise, bands often manipulated recordings of their own music, experimenting with playback speed, EQ, and other aspects of the

²³ R Hütter & M Richardson, Kraftwerk, *Pitchfork* (9 November 2009).

²⁴ Froese, Kay & Kay, Interview with Edgar Froese; Albiez, Sounds of Future Past.

²⁵ J Leidecker, Variations #3: The Approach, Radio Web MACBA, https://img.macba.cat/public/rwm/uploads/20120201/03Variations_transcript_eng.pdf.

J Pareles, Man, Alive to Machine Possibilities, New York Times (15 April 2012).

base recording to add 'musical dirt'. According to Edgar Froese from Tangerine Dream, recording and manipulating these sounds was not only 'much more fun', but also helped these artists to create 'new sounds definitely no one else has', again feeding into their desire for sonic originality. again feeding into their desire for sonic originality.

Location played a significant role in the recording process as well. Many Krautrock groups explored alternatives to conventional studios, affording them the freedom to record without interference from studio owners and employees (who were sometimes less enthusiastic about the bands' experiments) and creating the opportunity for a different-sounding environment. The nature of these studios varied significantly. Can elected to record in a castle, Schloss Nörvenich, with nothing but 'two stereo tape decks, four microphones, two small speakers, and a few malfunctioning amplifiers, in addition to the band's instruments'. Kraftwerk, on the other hand, founded their own studio, Kling Klang, which they outfitted with a vast array of electronic equipment. The band saw the studio almost as a laboratory and considered it to be such an essential part of their sound that they eventually modified it to be fully portable and have toured with it since the early 1980s.²⁹

Overall, Krautrock musicians' focus on sound quality and timbre informed many of the artistic decisions they made before even composing their works. They selected instruments, performance and recording techniques, and studio locations with the specific intent of creating a unique sonic identity. This philosophy also translated to the methods with which they composed their music.

Texture as Structure

Just as they used instruments and recording equipment to create a new *sonic* identity, Krautrock musicians used innovative compositional methods to develop a new *musical* one. Form was treated with a distinctly different approach than that of standard popular music, often

Froese, Kay & Kay, Interview with Edgar Froese. 27 Ibid.

²⁸ U Adelt, Krautrock: German Music in the Seventies (Ann Arbor: University of Michigan Press, 2016).

²⁹ M Beecher, Kraftwerk Revealed!, *Electronics & Music Maker* 9 (1981), pp. 62–7.

only loosely planned, if not entirely improvised. The structure of Krautrock tracks is generally based on changes of texture rather than common song forms or narrative lyrics. Said textures play a large role in the development of the loose stylistic categories of 'oceanic' and 'machine', which have come to be among the most recognisable qualities of Krautrock.

Musical form provided another avenue for the differentiation of Krautrock from mainstream popular practices. Krautrock musicians sought to 'get away from the A-B-A format in music', as Guru Guru's Mani Neumeier puts it, as part of the process of 'mak[ing] some sort of music that has not been there before'. Indeed, few Krautrock songs follow any semblance of this verse–chorus format. This may be due in part to the emphasis on vocal timbre over lyricism. The verse–chorus form is largely based on lyrical content: choruses contain catchy, unchanging refrains with memorable musical material – the song's 'hook' – while verses advance the song's narrative with different lyrics and, usually, subdued instrumental parts. The vague experimentalism of Krautrock vocals is not conducive to this type of songwriting. Instead, Krautrock form is largely derived from musical texture, which, in turn, involved certain performance practices specific to this movement.

Sean Albiez, in his study of the 'sonic futurscape' of electronic music during the height of Krautrock and beyond, outlines two larger categories of the electronic avant-garde in popular music: 'machine rock', which embraces a sense of kineticism and motion, and 'oceanic rock', which embodies a sense of stasis and expansive spaces. Both, importantly, involve movement: machine rock represents the time spent moving, while oceanic rock expresses the moments of stillness in between.³² These textural styles align to an extent with the subsets of Krautrock belonging to the Berlin and Düsseldorf Schools, respectively.

The term Berlin School refers to an oceanic variety of Krautrock commonly used by West Berliners Klaus Schulze, Manuel Göttsching, and Tangerine Dream, among others. These artists tended to create music of an ambient nature, with drones, slow or non-existent tempi, and gradual shifts in harmony, texture, and timbre. Sequenced patterns created motion, while sweeping melodies and non-musical sounds could be layered above the drones to add colour and timbral shifts. Oceanic Krautrock is

³⁰ F Gingeleit, The Drumming Man: An Interview with Mani Neumeier of Guru Guru, Aural Innovations 19 (2002).

J Summach, The Structure, Function, and Genesis of the Prechorus, *Music Theory Online* 17:3 (2011), pp. 1–13.

³² Albiez, Sounds of Future Past, pp. 141–7.

overwhelmingly electronic, and is particularly associated with the use of the Mellotron, an electronic instrument akin to an analogue sampler that produces choir-like sounds; orchestral instruments were sometimes used as well. Rock-associated sounds like guitar, drums, and vocals seldom make an appearance. Albiez describes the overall feeling of oceanic music to be 'contemplative, resting but sonically and texturally still searching for the new';³³ it is expansive, but not always serene, embracing a sense of the sublime.

This style is exemplified in much of Tangerine Dream's oeuvre, particularly their works in the mid to late 1970s. Their album *Phaedra* (1974) is considered to be a hallmark of the Berlin School. The title track epitomises the oceanic. It begins with an eerie, breathy synthetic drone, evoking feelings of the deepest expanses of outer space. A sequencer enters the mix, barely audible at first, sprinkled with high-pitched hollow tones. The piece builds, the sequencers gradually increasing in volume, pitch, and speed; processed noises and synthesised patterns build layer upon layer into a cacophony of sound. Eventually, it collapses into a nightmarish sound-scape of indeterminate noises and melancholy electronic melodies, fading away after nearly twenty minutes.

While the *kosmische Musik* of the Berlin School conveys a sense of the unknown expanses of the universe, the 'machine music' of Düsseldorf groups like Kraftwerk and Neu! has a highly controlled, mechanical quality. A significant component of this was the *motorik* drum beat first pioneered by Can's Klaus Dinger. *Motorik*'s beat is straight, unembellished, and in 4/4 time, almost metronomic in its consistency and sparseness. Other groups, like Kraftwerk, utilised drum machines or sequencers to this end, but the result was the same: a consistent, disciplined march towards an unknown destination. On top of this rhythm, a bassline establishes a groove, over which additional synthesisers and vocals are layered. The style also embraces machine-like timbres and sounds: non-electronic instruments and vocals are often heavily processed, and mechanical sounds frequently contribute to the texture. Furthermore, machine music features a significant amount of repetition: rhythm and basslines are often ostinatos, while the lyrics and motifs played over them are constantly reiterated.

³³ Ibid., p. 145.

³⁴ A Harden, Kosmische Musik and Its Techno-Social Context, *Journal of the International Association for the Study of Popular Music* 6 (2016), pp. 155–73.

³⁵ I Brockhaus, Kultsounds: Die prägendsten Klänge der Popmusik 1960–2014 (Berlin: Taschen, 2017).

Kraftwerk are perhaps the best-known example of machine music. Their 'Trans Europa Express' is built upon a dry, sequenced beat, over which a motif of short, rising synthesiser chords repeats. Over the course of the thirteen-minute song, the rhythm and basslines do not change, pushing the music along with the controlled insistence of a moving train. In addition to the rising chord motif, three other sounds appear throughout the song: a short synth-strings melody (which, along with the initial motif, is sometimes transcribed to the minor mode), a higher-pitched electronic drum pattern, and vocals. The lyrics, which mostly comprise repetitions of the song's title, are delivered rhythmically and without melodic contour, coming across as mechanical even when the band's signature vocoder is not used.

Across the spectrum of Krautrock, texture, rather than lyrics or established musical forms, informed the music's structure. Sections were determined by the addition or removal of certain sounds, a modular approach far removed from the verse–chorus model.³⁶ 'It's components, it's conceptual', stated Froese of this approach. 'There's development, gradual. Whereas in classical music there is drama. That's not our thing.'³⁷ This modular structure and gradual development was not necessarily planned; indeed, many Krautrock bands relied on aleatoric practices and improvisation, or, as Tangerine Dream's Thorsten Quaeschning prefers to describe it, 'real-time composing', while creating their albums.³⁸

This was structured to varying degrees. Can's pieces were largely improvised, but with a semi-planned structure, similar in some ways to jazz improvisation.³⁹ It differed, however, in its willingness to break away from traditional formal practices, as discussed by Holger Czukay:

Most of the bands I know that improvise, if at all, follow a certain pattern. Then they get to a point where they have the chance to destroy everything and develop completely new ideas. But at this exact point, which is so crucial, almost all groups go back to the theme! It's all over right there. What's different about us compared to almost all other bands is that at that point we keep playing.⁴⁰

After recording a jam session, Can would then overdub and manipulate the initial recording. Tangerine Dream's works were even more improvisatory: according to Peter Baumann, all their works were written spontaneously in

³⁶ Pareles, Man, Alive to Machine Possibilities.
³⁷ Ibid.

³⁸ Fifteen Questions Interview with Tangerine Dream, 15 Questions, https://15questions.net/interview/fifteen-questions-interview-tangerine-dream/page-1/.

³⁹ Adelt, Krautrock, p. 11.

⁴⁰ K Borchert, Can mit neuer Platte: Zukunftstage haben begonnen, *Musikexpress* 12 (1973).

the studio, without even a predetermined structure. 'It was intuitive', he stated in an interview. 'I can't remember there ever being a big discussion about the music itself. It just fell into place.'⁴¹ This practice was fairly common among Krautrock groups.

Even after a track was created and released, many Krautrockers were open to the idea of modifying and re-releasing it, allowing for multiple versions of a musical concept. Kraftwerk say their compositions are 'endless scripts', open to change and improvisation. Indeed, their songs are subject to near-constant reworking, most recently in the two box sets *Der Katalog* (2009) and *3-D Der Katalog* (2017). Many of Tangerine Dream's live albums contain pieces that are radically different from their original versions (as well as works that have never been included in their studio albums); moreover, they have released several remixes of their existing material, such as the dance-style *Dream Mixes* (1996). Froese staunchly defends this process, stating that '[n]othing on the planet has an immortal value, nothing will survive forever. . . . [T]he artist must have the freedom of choice to destroy his own art or at least rebuild structures and change the whole composition in order to pursue a new train of thought.'

This laissez-faire approach to form at every stage of composition allowed, once again, for great variety among Krautrock pieces. Some tunes, like Kraftwerk's 'Transistor', are just one or two minutes long; indeed, almost half of the tracks on the album from which it came, *Radio-Aktivität* (1975), are shorter than three minutes. Others, like a great deal of Klaus Schulze's works, last fifteen to twenty minutes or longer, to the point that several Krautrock records consist of just one track on the A- or B-side.

Through these innovative approaches to form and texture, Krautrockers developed a musical style that was thoroughly divorced from popular practices of the past. They eschewed traditional approaches to musical form, leaving much of the music's development to chance and spontaneity. The structure that does exist within these pieces, moreover, is modular, distinguishable by changes in texture rather than through a lyrical narrative or verse–chorus format. These textures were likewise unique, making use of their already-innovative choices of instruments and timbres to create the

⁴¹ P Baumann & C May, Tangerine Dream's Peter Baumann on Synth Improvisation and Studio Wizardry, The Vinyl Factory, https://thevinylfactory.com/features/peter-baumann-tangerinedream-interview/.

⁴² Richardson, Kraftwerk.

⁴³ E Froese, FAQ, Tangerine Dream Official Website, www.tangerinedreammusic.com/en/community/faq_detail.asp?id=68&tit=Fans+sometimes+argue+that+you've+ruined+the+original+version+of+a+sound+or+record+by+adding+new+layers+and%2For+changing+parts+of+the+original+composition%2E.

sublime soundscapes of oceanic rock or the automated kineticism of machine music. However, despite their endeavours to break from tradition, their music was not created in a vacuum. Krautrock was influenced, to certain extents, by other styles of music, even if they utilised aspects of these styles in different ways.

Musical Influences

Musicians of the Krautrock movement were united by a desire to create something that was sonically unique, a stark departure from the musical styles that dominated German culture at the time. However, they were not entirely devoid of musical influences, regardless of whether this was desired. The pioneers of Krautrock came from a wide range of musical backgrounds. Some were cooks and carpenters who picked up their instruments out of casual interest, while others had completed conservatory-level training, studying with the pre-eminent avant-garde composers of the time. Before founding the groups that would become flagships of the Krautrock scene, many played in different styles, from free jazz to beat rock to skiffle (a melding of blues and folk styles); moreover, some had developed an appreciation for musical styles from different parts of the world. Many elements of this wide palette of musical styles come through in Krautrock, but the most prominent are non-Western styles, avant-garde art music, and other experimental popular styles.

Many artists of the Krautrock movement borrowed heavily from non-Western musical traditions. Can frequently incorporated Afro-Cuban rhythms and basslines, while Neu! attributed their emphasis on repetition to Pakistani music. Bands sometimes even sampled musicians and everyday sounds from other countries; Agitation Free's *Malesch* (1972), for instance, contains recordings of an Egyptian market in addition to jams inspired by Middle Eastern cultures. Beyond this, many Krautrockers incorporated non-Western instruments, as discussed earlier.

In the case of classical music, most Krautrock musicians derived inspiration from contemporary composers, rather than the 'lengthy Germanic classical tradition' which was considered to be limited in its capacity to inspire originality. ⁴⁶ This is not to say that there was no borrowing from

⁴⁴ J Wallenfeldt (ed.), Sounds of Rebellion: Music in the 1960s (New York: Britannica, 2013).

⁴⁵ Interview with Michael Rother: 50 Years of Making Music, Derek's Music Blog, https://dereksmusicblog.com/2016/01/03/interview-with-michael-rother-50-years-making-music-2/.

⁴⁶ Pareles, Man, Alive to Machine Possibilities.

this extensive repertoire: some works, such as Manuel Göttsching's *Inventions for Electric Guitar* (1975) or Popol Vuh's *Hosianna Mantra* (1972), utilise traditional classical forms, while others, like Klaus Schulze's 'Wahnfried 1883' (a nod to Richard Wagner) or Kraftwerk's 'Franz Schubert' seem to emulate the styles of the composers they reference.

By and large, though, Krautrock has far more in common with the experimental styles of the mid-twentieth century. Their experiments with tape music and sampling are connected to the works of Karlheinz Stockhausen and György Ligeti, with whom some of them had studied, while the focus on repetition, modular forms, and drones, which feature so heavily in Krautrock, relates closely to minimalist composers like Terry Riley, Steve Reich, and Philip Glass. However, other Krautrockers are ambivalent about this connection, feeling a stronger kinship with other experimental popular genres. The vast array of musicians and bands to whom they have credited influence includes Frank Zappa and The Mothers of Invention, The Beatles, Pink Floyd, Jimi Hendrix, Miles Davis, Ornette Coleman, and The Velvet Underground, all of whom were pioneers of art rock, free jazz, and other similarly experimental genres. Though there are at times stark differences in the styles and practices of these groups and Krautrock - not unlike the variety found within Krautrock itself - they shared a common goal of innovation and originality.

Despite their goal of musical originality, Krautrock musicians were influenced to a certain degree by other styles. Some, like non-Western musics and avant-garde classical techniques, were incorporated into Krautrock, while others, like art rock and free jazz, were inspirational in their similar attitude towards music-making. However, it could be argued that even the genres that Krautrockers rejected – not only traditional classical music, but also *Schlager* and Anglo-American rock – influenced the development of Krautrock's unique sound.

For it was these styles that created the need, in these musicians' eyes, for such innovations in the first place. Krautrock's negative reaction to these mainstream genres created a new space, one that was open and dynamic, and could be filled with any style. This music is not at all uniform in its instrumentation, musical content, or style, but there is one unifying factor: it was something entirely new.

Recommended Reading

- U Adelt, *Krautrock: German Music in the Seventies* (Ann Arbor: University of Michigan Press, 2016), pp. 1–110.
- S Albiez, Sounds of Future Past: From Neu! to Numan, in T Phelps (ed.), *Klangtexturen in der Pop- und Rockmusik: Basics, Stories, Tracks* (Bielefeld: Transcript, 2003), pp. 129–52.
- B Kutschke & B Norton (eds.), *Music and Protest in 1968* (Cambridge: Cambridge University Press, 2013), pp. 188–204.
- D Stubbs, *Future Days: Krautrock and the Building of Modern Germany* (London: Faber, 2014), pp. 151–208, 277–311.

