Social Construction of Technology: Where it Came From Where it Might Be Heading

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Origins

- Strong Program in Sociology of Scientific Knowledge (Bloor 1976)
- Bath School of SSK and Empirical Program of Relativism Collins (1981)
- Note Q to Pinch on arriving at Cornell in 1990.
- Q. "Oh you do what Bruno Latour does?"
- A. "No he does what we do."

Inspiration from Berger and Luckmann

 "What remains sociologically essential is the recognition that all symbolic universes and all legitimations are human products; their existence has its base in the lives of concrete individuals, and has no empirical status apart from these lives."

• B&L:146

Technology Shapes Society



How Does Society Shape Technology?



SCOT

- The social construction of technological artefacts
- Following how artefacts are contested and stabilized.
- Draws attention to the role of relevant social groups

SCOT

Social Construction of Technology

- Pinch and Bijker (1984)
- Bijker (1995)
- Kline and Pinch (1996)
- Oudshoorn and Pinch (2003)

Main SCOT Concepts

- Relevant Social Group
- Interpretative Flexibility
- Closure
- Influence of Wider Culture
- Technological Frame
- Users as Agents of Technological Change

Main Changes in 1980s - today

- Much more talk of coconstruction, mutual shaping, coproduction
- Less interest in the social explaining the technical more in how each influences the other

Bob Moog 1934-2005



Modular Moog Synthesizer



minimoog synthesizer



How does Synthesizer Stabilize?



Main Method: Follow The Instruments

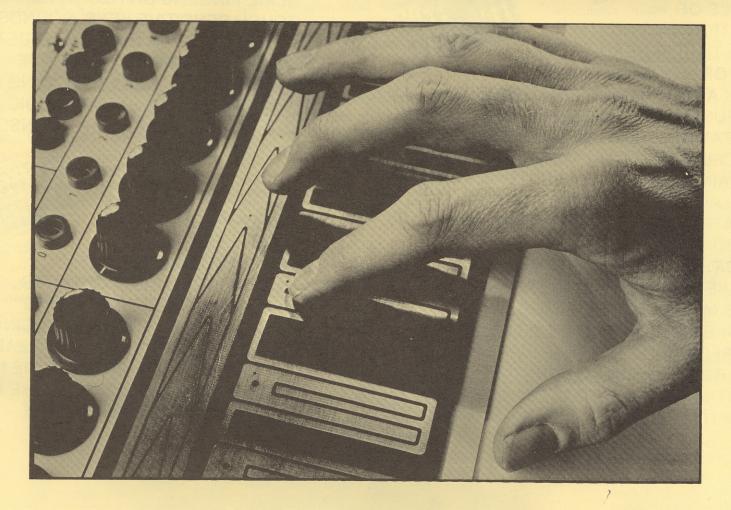
- Places: factories, studios, festivals, buses, sound stages, clubs, concerts, restaurants, retail music stores
- Uses: music, ads, psychedelic experiments, movies, tv, education
- Users: musicians, ad people, "hippies", sales people, listeners

Old Rockers!



BUGHLASYNTH





BY DON BUCHLA AND CHARLES MACDERMED

PHOTOGRAPHY BY DON ARMFIELD



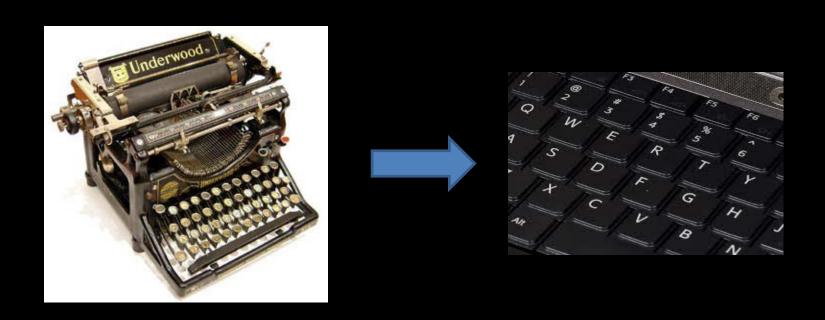
The Importance of Keyboards

"The Keyboards were always there, and whenever someone wanted to take a picture, for some reason or other it looks good if you're playing a keyboard. People understand that then you're making music. You know [without it] you could be tuning in Russia" — Bob Moog

Buchla

- Rejected keyboards
- Felt psychologically stymied when he connected a standard keyboard to his modular system

Same story for Computers QWERTY Keyboards?



The Importance of Standards

- Moog standardized around one-volt-per octave.
- This standard had no meaning for Buchla as he rejected conventional keyboards

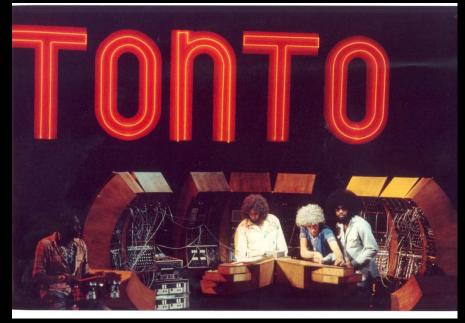
Moog Cultivated His Users

- Went on the road to install synthesizers
- Brought musicians to his factory
- Employed studio musicians and offered free tuition in his factory studio
- Produced <u>Electronic Music Review</u> from his factory

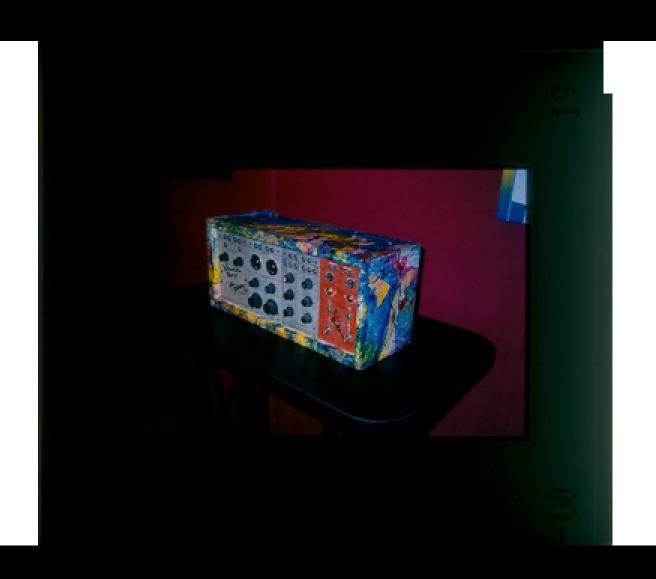
Technology Influenced and Shaped by Wider Culture and Helps Shape that culture

In case of Moog and Buchla it was Psychedelic sixties





Ken Kesey's Buchla Box



Trips Festival San Francisco 1966



MONTEREY POPS 1967

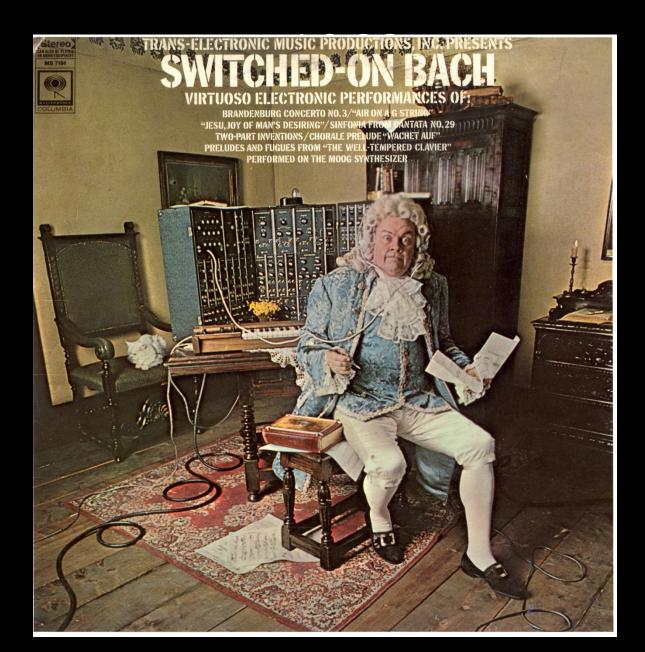
- The Doors, The Byrds, The Beatles
- Psychedelic washes of sound
- e.g. "Here Comes the Sun"

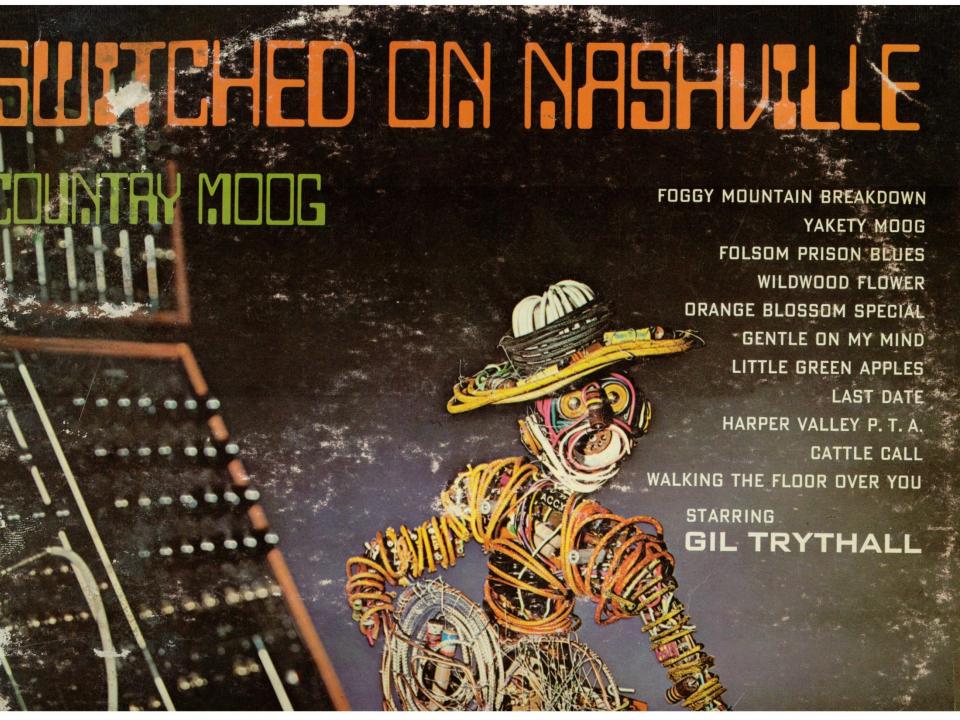


BEATLES

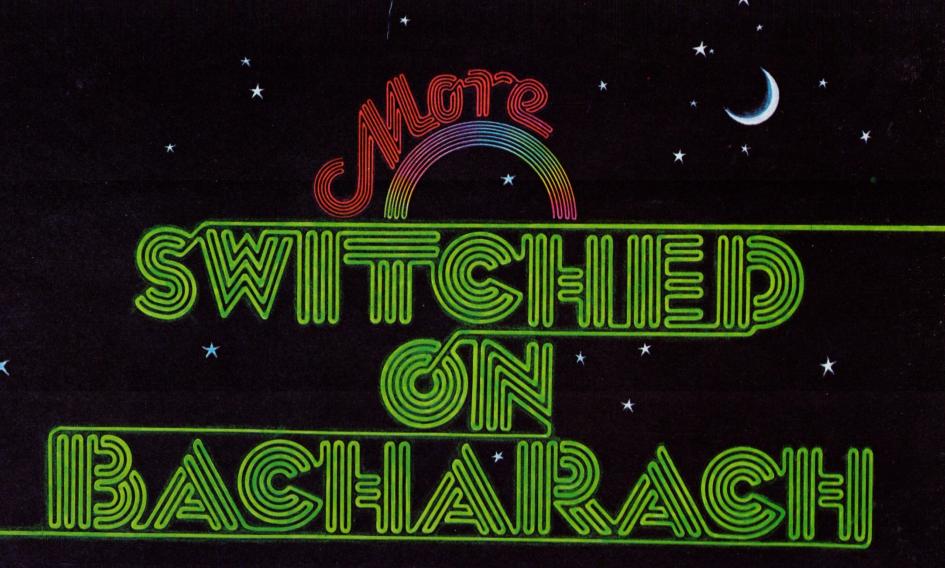












PERFORMED ON THE MOOG SYNTHESIZER BY SIR CHRISTOPHER SCOTT PRESENTED BY ELECTRONIC MUSIC PRODUCTIONS, LTD.

PROMISES, PROMISES / I'LL NEVER FALL IN LOVE AGAIN / A MESSAGE TO MICHAEL WISHIN' AND HOPIN' / REACH OUT / CLOSE TO YOU RAINDROPS KEEP FALLIN' ON MY HEAD PAPER MACHE / EVERYBODY'S OUT OF TOWN / TRAINS, BOATS AND PLANES

*





How Place Matters

- Buchla is part of the counter culture, lives in San Francisco is friends with the Grateful Dead, consumes lots of LSD.
- Moog lives in un-hip Trumansburg, is a bystander to the sixties, and remains as a fifties engineer with a pen protector. He attends pot parties but never inhales. He hires a sales rep in LA to deal with the "hippies" and has very mixed feelings about uptake of his synthesizer in psychedelia.

minimoog synthesizer



Synths get into retail music stores

- 1970.
- David Van Koevering (ex-evangelist preacher) finds new way to "demonstrate" minimoogs

Recruits new users – young rockers





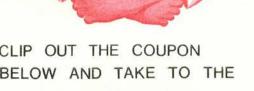
This is your invitation to

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A HISTORY OF MUSIC



A COLLECTION OF THE WORLD'S MOST UNUSUAL MUSICAL INSTRUMENTS FEATURING THE ELECTRONIC

MOOG SYNTHESIZER

Sales Problem

- Users need to touch and explore a new instrument before buying it
- Lends instruments to keyboard players in clubs
- Shows them how to make first preset sounds and explore
- Take musician to retail music store with deal ready work on girlfriend or mother for finances!
- Build retail sales network



Social Construction of Sound?

- We trace how technological artefacts stabilize
- We trace how sounds stabilize

FIRST SOUNDS OF MOOG

 "The door was open, we didn't have air conditioning or anything like that, it was late Spring and people would walk by, you know, if they would hear something, they would stand there, they'd listen and they'd shake their heads. You know they'd listen again what is this weird shit coming out of the basement?" - Bob Moog

Some Sounds Fail to Stabilize

 Paul Beaver began plugging in a bewildering array of patch cords. He'd hit the keyboard and bizarre, Karlheinz Stockhausen-like sound would emerge. "Actually that sound you had about three sounds back was very usable. Could you go back to that?"... "That Crystalline sound" Jim Morrison joined in. "I liked the sound of broken glass falling from the void into creation." Which sound was that?" said Paul Beaver. Ray Manzarek

A Stabilized Sound

- Moog Fat Bass still used in EDM and Techno
- Simon and Garfunkel Bookends
- Yawling sound of Monophonic solo on minimoog – opening of filter

The importance of sound

- Moog described it as the sonic wall paper of electronic sound
- Van Koevering "The sound was in the air it was everywhere"

Social Construction of Technology: Issues for the Future

- How are human practices and experiences mediated by material world and technology?
- How are senses constructed?
- What <u>about affect?</u>