

Executing Queries as a Form of Artistic Practice

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With the prevalence of technology today, data is enormously generated and disseminated in real-time through a highly networked, programmable and distributed environment. Networks of machines and execution of code always mediate the now that is overwhelmed by data scales, massively generating across time and space. Meanwhile, this distributed environment also informs new ways of producing artworks and examining our techno-culture. This essay explores artworks that employ and execute ‘queries’, collecting data and re-presenting them through screen-based media and installation.

Within the domain of software art practices, attention moves from the representation and display of art objects to the production and processes of computational systems that have been retreated into the background. This essay emphasizes queries as a non-neutral format beyond its technical function. A query is most commonly understood as a language. Structured Query Language (SQL) is one of the most popular query languages. It is used to communicate with a database through a well-defined instruction. Ashok K. Chandra and David Harel define “[a] query language is a well-defined linguistic tool, the expressions of which correspond to requests one might want to make a data base. With each request, or query, there is associated a response, or answer”¹ Therefore, the execution of query is a two-way communication that includes both a request and a response. Indeed, a query has the capability to create and identify data relations. Thus, queries exhibit a certain material power and are not simply to be regarded as neutral commands.

Application Programming Interface² (API) is a form of machine query and interface that is used for communication between applications or programs. It is becoming commonplace in the Internet industry, with APIs doubling almost every year between 2005-2011.³ Offering corporations include Yahoo, Google, Facebook, The BBC, Baidu, Weibo and many more, spanning across western and eastern continents. Drawing on Tim O’Reilly’s notion of remixability, Anne Helmond highlights the importance of such third parties’ queries. She emphasizes that data remixability does not only include capturing, storing and organizing data, but also its distribution⁴ APIs allow data to be redistributed through third party applications, consequently this opens up third-party connections that help generate more data, activities, and usage.

1. Chandra and Harel, “Computable queries for relational databases,” *Computer System Science* No. 2 (1980): 156.

2. API is a set of protocols and specification that make data query possible, hence as an “art-making enabler.” See Soon (2011).

3. DuVander, (2012): n.p.

4. Anne Helmond, (2015): 6.

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Offering API is crucial towards the establishment of a platform. The concept of a platform means to open for participation and content generation. Helmond further articulates the concept of a platform that is programmable, enabling participation extending from end users to developers. She explains, “In order to become a platform, a software program needs to provide an interface that allows for its (re)programming... [The API] makes a website programmable by offering structured access to its data and functionality and turns it into a platform that others can build on.”⁵

Helmond argues that API is an active agent that changes social media from the paradigm of sites to platforms.⁶ In other words, participation can also be achieved through a programmable query, extending from the usual understanding of human participation to nonhuman interaction.

In the western art scene, artists explore such interactions through various art forms. In 1997, a pioneer German net artist Cornelia Sollfrank produced an artwork *Net.Art Generator*⁷, an endless generative machine, by using Google’s image data bank and Google’s query. The work constantly generates Andy Warhol’s image as a piece of Net Art through a user’s keyword search, expressing the socio-technical processes of algorithmic manipulation. The use of query can also be extended from the web to sculptural settings in artistic practice. For example, Julius Popp’s piece *Bit.Fall*⁸ (2001-2006) extracts fragments of Internet data through a customized program and turns these fragments into water drops that are rendered in the form of text. The work displays the most frequently used keywords as a curtain of waterfalls in which recent web feeds are queried. While there is no physical trace in *Bit.Fall*, a more recent piece, *Murmur Study*,⁹ (2012) utilizes Twitter messages and prints them on physical thermal receipt papers. Developed by Christopher Baker, Márton András Juhász and the Kitchen Budapest, a customized program that pays attention to the Twitter updates that contain variations on common emotional utterances like argh, meh or grrr. These three artworks suggest that query execution is becoming an important part of artistic

practice; those practices consist of data collection and manipulation through various web platforms.

Jsut code (2010-2012), a large-scale installation made by Helen Pritchard and Winnie Soon, explores a continuously evolving and mutating database through Twitter API.¹⁰ In this work, there are many Quick Response (QR) codes displayed on a wall, waiting for audiences to decode the meaning with the use of a smartphone. The QR codes include both static and dynamic images. The real-time projected QR codes are being programmed, querying data from Twitter databases with the keywords ‘life’ and ‘death.’ Viewers encounter a continuously updating feed as the machine translates language to image and Twitter messages to QR codes. QR code is being massively used in China, from advertising promotions to daily contacts exchange. This is facilitated by the mobile messaging application WeChat with a built-in QR code scanner. In 2015, a recruitment campaign held in Taiyuan,¹¹ Shanxi Province of China created a massive grid structure display of QR codes. The QR codes consist of job opportunities and company profiles; job seekers decode the QR images and post résumés to companies through WeChat. QR code is similar to any form of computer code in that it can be examined purely technically, but the social and cultural understanding of code offers a different perspective in thinking about code interaction, involving a collective of both humans and nonhumans. Code, in the work of *Jsut code*, is a call to action, a call for execution. QR code acts as a call to action for the viewer, as they become an active user of a reading machine. The work *Jsut code* explores different dimensions of data query, performing questions about automated production, collective intelligence and the value of labor and artistic production.

Such reflection on technology and culture, in particular, the data query processes, is something David Berry and Michael Dieter would describe as the “post digital aesthetics.” It is understood as an approach to examine and reflect a deeper implication of new distributed digital technologies, in which sociality is performed and mediated.¹² The focus is to take seriously the notion of aesthetics by

5. Helmond (2015): 35.

6. Ibid.

7. See: <http://www.obn.org/generator/>.

8. See: http://www.strozzina.org/asap/e_popp.php.

9. See: <http://christopherbaker.net/projects/murmur-study/>.

10. See: <http://siusoon.net/home/?p=601>.

11. See: <http://toutiao.com/a4047531717/>.

12. Berry and Dieter (2015): 1.

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shifting the attention from what is represented to how something is represented with the changing techno-culture.¹³ Technology is constantly updated and some as artworks too. Indeed, the *Net.Art Generator* has stopped functioning because of the sudden and seamless change of the Google search query.¹⁴ Cornelia Sollfrank did not receive any announcement from Google in advance about the change and has put up a webpage stating the work “is currently not operational.” A particular format of a web API can be obsoleted in time. In the case of Twitter, the Web API once had a major change from v1 to ver1.1 in 2013. If *Jsut code* has to be exhibited again, it requires a massive code update. This update culture can be observed in our software culture too, as for instance with new updates of operating system, software, servers and databases to name a few. A company usually supports legacy software for a certain period, and ultimately, it has to become obsolete. According to Florian Cramer, the notion of post-digital aesthetics also refers to a disruption that is brought upon by digital information technology.¹⁵ Specifically, the disruption of API has been observed in both the artworks of *Jsut code* and *Net.Art Generator*. This focus of post-digital aesthetics addresses the critical perspective of new media and technology beyond mere technical functioning and the common understanding of “upgrade.” Any upgrade includes not only new features forthcoming, but also the obsolete past and the inexecutable future. The inexecutable query is, therefore, conditioned by the new update.

In contemporary software culture where data is enormously generated and disseminated through a highly networked, programmable and distributed environment. Such notion of contemporaneity, as Peter Osborne reminds, “is primarily a global or a planetary fiction.”¹⁶ This could be understood as data queries that are highly capitalized in this global state. In particular, the offering of APIs that shapes a platform where data can be queried, executed and expanded across space and time. With the increasing use of data query and real-time technology in artistic practice, I suggest taking into account the notion of post-digital aesthetics when reflecting on our techno-culture and examining the works of art.

13. Berry and Dieter (2015): 7.

14. Personal Communication, October 28, 2015.

15. Florian Cramer (2014): n.p.

16. Peter Osborne, *Anywhere or Not At All* (London, New York: Verso, 2013), 6.