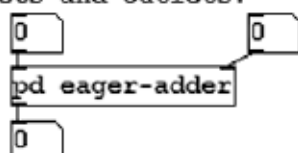


You can nest entire windows inside Pd boxes (and so on, as deep as you wish.) There are two different ways to do it. First, if you just want to add a room to the house, so to speak, type

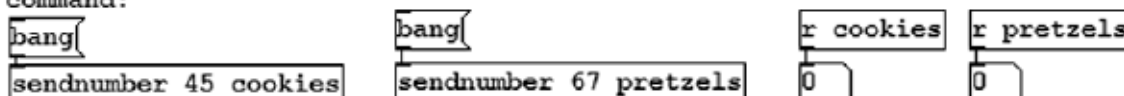
```
pd sample-subpatch
```

 <-- you can give the window a name as an argument

If you click on the box (in run mode) the subwindow appears. Click on the one below to see how you give a subpatch inlets and outlets.



There is also a facility for making many copies of a patch which track any changes you make in the original. The subpatches are called abstractions. For example, here's a simple abstraction that sends a number to a "receive" on command:



There is a separate file in this directory named "sendnumber.pd" which is loaded every time you type "sendnumber" in a box. Click on a "sendnumber" box above to see it. You can make changes in the subpatch and save them. The changes will be saved back to sendnumber.pd and not as part of this (containing) patch.

If you change one copy of an abstraction the change isn't automatically made on any other copies. You must keep track, save the changes, and cause Pd to reload the other copies (for example, by closing and reopening the containing patch.)

note that "\$1", etc, has a different meaning in object boxes (open one of the "sendnumber" abstractions for comments.)

updated for Pd version 0.34

## Is Pd Art? No and Yes. Two Attempts

Jürgen Hofbauer / Marc Ries

### FIRST ATTEMPT

*To the structure of the question.* The question of whether something is art or not, seems to arise with immutable persistence whenever something “new” appears.<sup>1</sup> Just as an era can be measured and understood by its answers, this question could be understood as the constituting moment of the age which with torturous maneuvering has been paraphrased as postmodern; the enemies of cryptomantic definitions would rather speak of a post-fascist or post-European age.<sup>2</sup>

In case the questions, which are asked at a time, in fact determine the character of their epoch – such as with the question about the essence of love a platonic age begins in an area of the erotic (see Foucault<sup>3</sup>), or an epoch of maturity emerging from the military ranks – with the question “*what is the Enlightenment*” (see Kant), or a post-communist age with the question “*who are the people*” then three further questions must be added to describe the style of the post-European age: *Is this democratic or fascist? Is this discriminatory or not? Is this sexist or not?* The circle of these four questions can be read as the core of a new anthropology which will slowly but surely supersede further Kant’s anthropological questions which are understood as the center of an anthropology of the Enlightenment (*What can I know? What should I do? What can I hope for? What is a human being?*<sup>4</sup>). Nevertheless, there will still be structural analogies between Kant’s questions and those of the postmodern age. For just as one cannot quietly stay with a single question in the *anthropology of the Enlightenment* without exerting a considerable influence on the answer of the remaining questions, in a post-fascist age one is also driven from one question to the next. (And the new as well can only be understood from these viewpoints: *Now, if it is not art, is it fascist? If it isn’t fascist, is it perhaps nevertheless discriminatory? If it isn’t that either, is it at least sexist or at least not?* – The cool ambivalence of

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<sup>1</sup> The question posed in the title was also a theme of a plenary discussion at the convention. It was eagerly discussed, then given up after a while (perhaps for strategic reasons).

<sup>2</sup> The collapse of European fascism in the first half of the twentieth century and the *hype* of democratic structures strengthened by this support the definition of a post-fascist age (supports the idea of a post-European age). The fact that wars affecting the continent are no longer fought on it supports and after the events of *London 05*, Europe can be seen as collateral damage of US foreign policy.

<sup>3</sup> See: Michel Foucault, *Der Gebrauch der Lüste, Sexualität und Wahrheit 2* (Frankfurt am Main: Suhrkamp, 1989), p. 294ff.

<sup>4</sup> Immanuel Kant, *Werke in zehn Bänden*, Hg. v. Wilhelm Weischedel, Bd. 5 (Darmstadt: Wissenschaftliche Buchgesellschaft, 1968 [nochmals überprüfter Nachdruck von 1959]), p. 448.

the strait-laced thinking of political correctness is as unambiguous as tragic, above all for those artists who do not submit to the antagonisms of the new canon.) The entanglement of the system covers up the critical difference; postmodern questions no longer center on human beings but solely on the new, the novel. They are in fact displays of a decentralized subject (an anti-subject), a no longer anthropocentric thinking, a self-forgetting stance of the person receiving. At the same time, they give testimony to a ridiculous and tragic narrowness, a neo-fundamentalist worldly wisdom which can only measure each newly appearing phenomenon with the antagonisms of *aesthetic/unaesthetic, fascist/democratic, discriminatory/unprejudiced, sexist/asexual*. The eye of this anthropology is optimistic and as agape as greedy, focused on the new, but it is a damaged gaze, having become blind from the questions from its own tongue about the character of the new experience. The perhaps sometimes much too metaphysical babble of questions like Kant's gives way to the gray star of the bourgeois desire for definition.

The world, constantly on the lookout for the new, driven and professionalized by an "unenlightened" subject is the emblem of a new age.

*Result and process oriented aesthetics.* The question of what all this has to do with Pd must be answered with a reminder which leads to an essential paradox of art theoretical thinking, the differentiation between *process* and *result oriented aesthetics*. Reflection on the aesthetic value of Pd – which as mentioned before is a characteristic narcissism of the previous century – can be taken as a form of play of this more original and though forgotten, nevertheless very trusted conflict. It becomes possible to regard Pd as a process provided that a minimal readiness is found. The attempts to secure the dominance of process in the territorial waters of aesthetics may be too old to be blessed with a clear historical origin and understood. From the recent past, at least some of the following (without being exhaustive) come to mind: the equal opportunity of home recordings (from the *Basement Tapes* to *Smog* to *The Headphone Masterpiece*), the democratization of the means of production (formulated somewhat generally, but because of this, it is probably known what is meant), action painting, actionism, the whole area of media art, etc., etc. If Pd now claims – which is very obvious – to be a further step in the direction of a process oriented aesthetic (what in turn is obvious because the products of Pd artists often do not differ essentially in their phenomenalization of results from those of unimaginative software users), then a welding process with other process oriented aesthetics – media aesthetics first of all – is inevitably set into motion. Yet without doubt, the discourse about the primacy of the process is an archetypal genre of the twentieth century. (Although the prelude of this discourse goes back further than our heuristic-simplistic position may admit, isn't for example Lessing's celebrated question of inwardness, whether Raphael wouldn't have been just as great a painter if he had been born without hands, nothing more than a shift in the focus of attention in the direction of a process oriented aesthetic?)

But what if, despite the media age, the work of art suddenly returned to the forefront, if the epidemic of boredom left the quarantine of art galleries in order to return to seemingly dead categories – artists, people, and works, if not *great successes* – in the hope of an external recov-

ery in passion? If, in opposition to pessimistic labeling as reactionary restoration, result oriented aesthetic celebrates a renaissance?

## SECOND ATTEMPT

The question “Is Pd art?” can possibly receive a second question as an answer. This second question revolves around the problem of indistinguishableness: Can a sound or image made with Pd be distinguished from a sound or image produced with conventional software? The question should probably be answered in the negative; nevertheless, the nature of the question – the comparison – leads to a field that reaches far beyond that of traditional aesthetics. Pd sound does not just represent the intentionality of an artist; it represents the *decision* both for a certain procedure and for a culture-technical disposition instead of another. This means that Pd sound and images open up not only to a perception and interpretation of the receivers; in fact, they call for a “position” from them in the face of the said decision. It is precisely this moment which makes of Pd an artistic strategy which cannot be seen or heard but rather *understood* and *put into perspective*.

But what is this culture-technical disposition? It can be thought of in two ways: on the one hand, as the application of Pd as Open Source, thus the disclosure of the source code and its collective further development, on the other hand, the formally, completely unified control of sound and image, thus the structural equality of both: the resolution of the separation of the Apollonian and the Dionysian.

### *Pd as Open Source*

Open Source begins when something is not yet a good or a thing, begins thus before a practical value which assumes material and process, already before a practical value that assumes material and process, and thus long before the exchange value invested in the practical value and the surplus which results from this. OS stands for the leaving open, the imperfection, the becoming of a production. This is considered discontinuous and contingent. It does not follow a master plan and is not goal-oriented; in its development it is unpredictable.

OS is presented in three steps:

- The “free” source code which is disclosed is reconstructed; all who want to use it think about it; it is copied, translated, transmitted: in this respect a “mimetic value” for OS can be spoken of here, a value which makes the copying and the representation of code in one’s own computer possible. This mimetic value precedes the practical value.
- The code is enhanced for each special application; it is developed, it is differentiated.
- The results and the new elements of the code are made available again to everyone; they are thus shared with everyone; further thoughts are disclosed to everyone.

When Marx wrote that the circulation of goods, thus the circulation of goods as the coupling of practical value and exchange value, constitutes the origin of capital, “in the sixteenth century, international trade and the world market inaugurated the modern life story of capital”, then the worldwide circulation of programs and operating systems as Open Source in the Internet does not constitute a new era of capital or consumption but one of the power of the collective; this defines a society of co-producers, not one of the spectacle.

OS can be translated not into capital values but directly into that of the *agency* of its users and developers, thus into “*performing* values.” Even when OS is not profit or surplus oriented, its goal is not loss or the unproductive overestimation in the sense of Bataille’s economy. The productive turns into the *performance*, into separate actions and positions, the interferences of countless users worldwide. It is neither a matter of possession nor of lacking possessions but of participation in the collective becoming and functioning of a system, of a program. OS as an abundance of the means of production belongs to those who are interconnected with each other, who develop it further. OS is not the conventional product of an industry and its shareholders but rather the respective product, in good German the *Erzeugnis* (product), whose production, which is as a matter of course never able to be finished, always resonates in it. Its testimony is that of micro and very small movements of all those who bring it about, use it coherently and develop it further.

The performative has monopolized the present as a concept and as an aesthetic practice. When you look closely, there are acts in a *performing way* everywhere. It seems that the time is ripe for the individual assure his or her power of action, of differential *agency*. It is not so much simply stated that there is political as well as economic power; in fact, something like a countervailing power is tested out in networked applications or also in the use of a “remote control”. Pd as OS is committed to this countervailing power, committed to communicating it in hearing and vision as an element of knowledge, of the realization of perspectives in exactly these premises.

### *Pd as Tragedy*

Nietzsche examined the problem of the aesthetic effect that comes into being, if the separated potencies of art – considered singly – or more precisely the Apollonian and the Dionysian view are actuated side by side. Or how music is related to conception, notion, idea and image.<sup>5</sup> Nietzsche had described the Apollonian view as an *artificial world of the dream* (as a *vigorous delusional vision as sensual illusions*) and esteemed the *speciousness as medial world of art what is again the principle of individuation then*.

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<sup>5</sup> Friedrich Nietzsche: “Die Geburt der Tragödie”. In: KSA 1. Berlin/New York: Walter de Gruyter, p. 104

The Dionysian view, in contrast, is celebrated as the *artificial world of noise*, as the shattering to pieces of individuation, as *total self-oblivion* in the medium of music. Although both always appear together, the sonorous self volitions is tempered by a discharge of series of images.

Nevertheless the question must be asked what an aesthetic effect arises when image and music not only exist next to each other but also *interact with one another*? If both are due to the same principle of origin – for example to the programming language called Pd, which enables “sound painting”, “Pd (aka Pure Data) is a real-time graphical programming environment for audio, video, and graphical processing.” In a primary stage, Pd was developed to enable the production of electronic music compositions independent of proprietary technology. Sounds are produced through *patches*, a kind of “diagrammatic programming” in a graphical environment; they have resemblance to geometric figures and numbers, which are – as the generic forms of all possible objects of experience – used a priori for all objects.<sup>6</sup> Schopenhauer, whom Nietzsche cites here at length, defines music as “a universal language to the highest degree” which works with *universalia ante rem*, thus with universalities which lie *before* things, seemingly without material or body, which are *pure form*. Its transformation through formal, algorithmic operations into the form of *patches* seems to favor this understanding of music. Independent from the physicality of the instruments, it is now developed on the “universals” of microprocessors. These too are not interested in things but in the pure forms of calculations. What is out of the ordinary is that the *patches* can similarly be deployed for the generation of images. What Pd generates in images are not “appearances”, is not “something that appears to be”, but just like sound, are a self-expression of the *will of the machine*, if you like. This strict equality of sounds and images in the process of their fabrication, the indistinguishableness of their “essence”, is not recognized by the senses, but knowledge about Pd makes possible – comparable to the use of Open Source – a certain perception of the products, for instance the performing character of a concert. These perceptions should also lead to a reading of Pd as “art” and as an aesthetic intervention which equally dissolves the separation of manufacturing and using, like that between the art worlds of image and music. The transformation of one into the other and the separate areas becoming equal can indeed be described (with Nietzsche very affirmatively) as “tragic art”, as a culture-technical *disposition* which unfolds in the shadow of the logic of power.

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<sup>6</sup> Ibid, p. 105