

## 書報討論 Seminar

文獻題目：《Labor》

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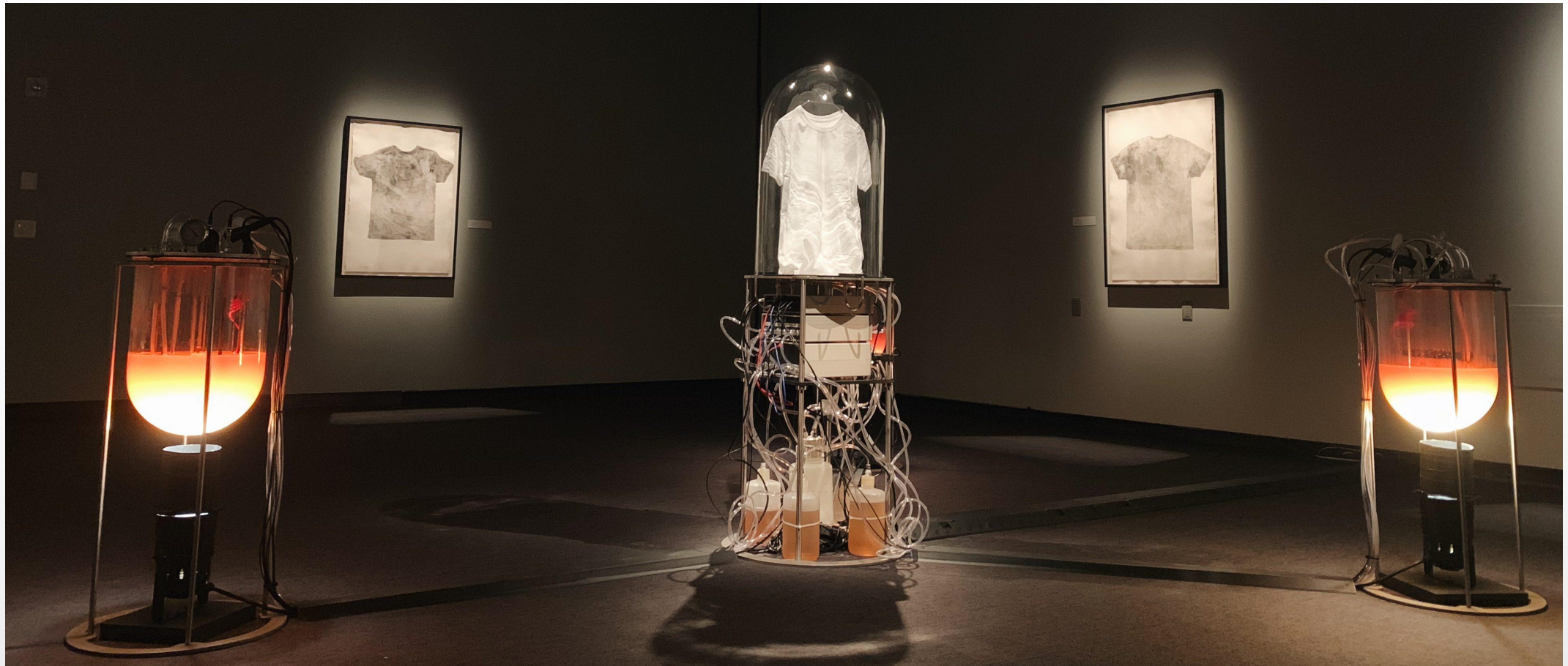
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Labor

Paul Vanouse (US)

**LABOR**

Paul Vanouse

2019



What does exploitation smell like?

Labor is a dynamic, self-regulating art installation that re-creates the scent of people exerting themselves under stressful conditions.

There are, however, no people involved in making the smell—it is created by bacteria propagating in the three bioreactors in the artwork.

Each bioreactor incubates a unique species of human skin bacteria responsible for the primary scent of sweating bodies: *Staphylococcus epidermidis*, *Corynebacterium xerosis*, and *Propionibacterium avidum*.

As these bacteria metabolize sugars and fats, they create the distinct smells of human exertion, stress, and anxiety.

Their scents combine in the central chamber in which a sweatshop icon, a wearer-less white T-shirt, is infused as the scents disseminate out, intensifying throughout the exhibition.

剝削聞起來是什麼味道？

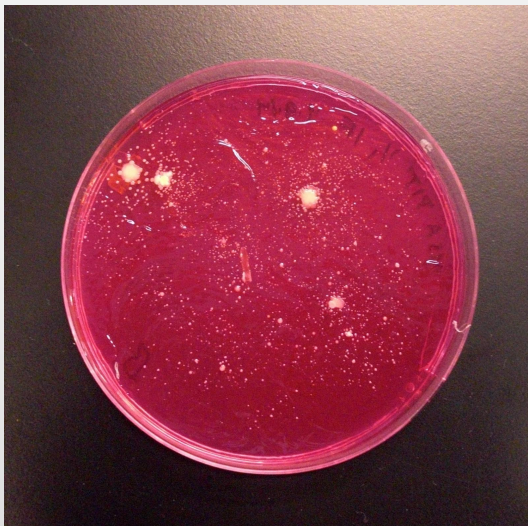
勞動是種動力，是自我調節的藝術裝置，人們在有壓力的條件下，重新創造自己所散發出的氣味。

然而，沒有人參與製造這種氣味——在這件藝術作品中，它是由三個生物反應器中的細菌通過繁殖（傳播擴散）而產生的。

每個生物反應器都在培養（孵化）一種獨特的人類皮膚細菌，它們是身體出汗所散發出來的氣味的原因：表皮葡萄球菌、棒狀桿菌、親和丙酸桿菌。

當這些細菌代謝糖和脂肪時，它們產生了人類在努力、壓力和焦慮（狀態下）的獨特氣味。

他們的氣味在展廳中心融合在一起，氣味中注入了剝削勞力力的工廠標誌，一件無人穿戴的白色t恤，隨著味道的散佈（傳播、散發），在整個展覽過程中氣味不斷在加強。





Process I initiated this project at the Biofilia laboratory in Helsinki.

There I isolated *Staph epidermidis*, which produces a mild scent, and *Propioni bacteria*, which produces funky, acrid odors.

I isolated them by covering my armpits in sterile pads in a day that included mild exercise, white-collar labor writing proposals, and scheduling meetings.

Cultivating skin bacteria in vitro is difficult as these strains best survive in the complex ecosystem of the human epidermis.

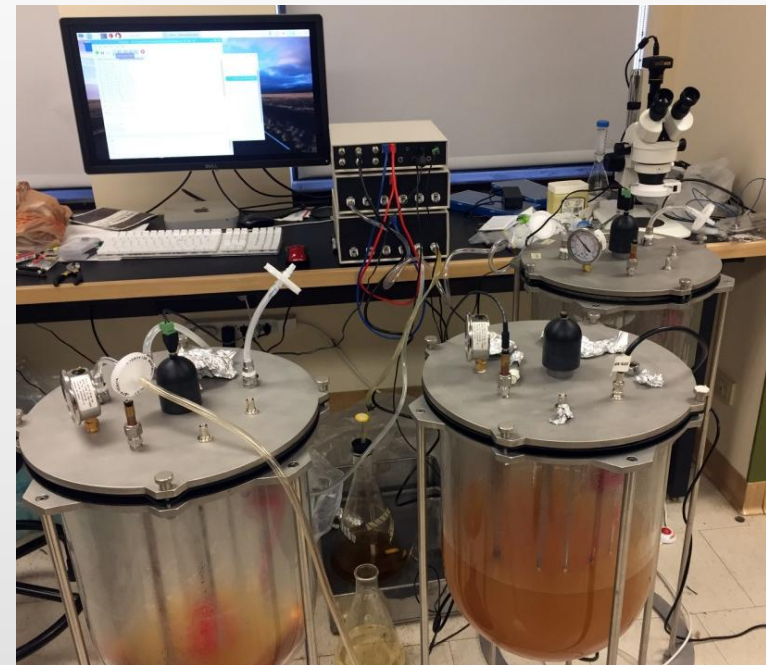
At the Coalesce Center for Biological Art in Buffalo, I've built incubation equipment to investigate at which metabolic stages, and under which conditions these organisms are the most fragrant.

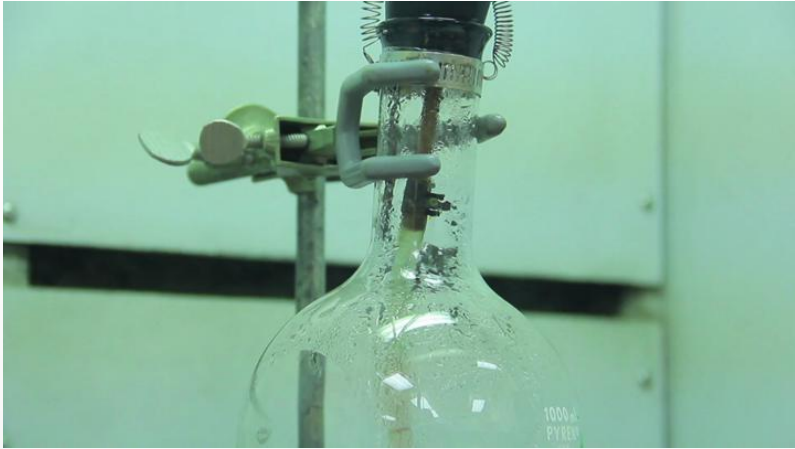
我在赫爾辛基（芬蘭首都）的生物纖毛實驗室發起了這個專案（2014年）。在那裏我分離出表皮葡萄球菌(*Staph epidermidis*)和丙酸桿菌(*Propioni bacteria*)，前者產生一種溫和的氣味，後者產生一種難聞的辛辣氣味。

我用無菌墊把我的腋窩包起來將它們隔離，並儘量在一天內溫和的運動，（像）白領勞工（一樣）寫提案，安排會議。

因為這些菌株在人類表皮複雜的生態系統中能生存得最好，所以在試管外培養皮膚細菌是困難的。

在布法羅（水牛城）的生物藝術聯合中心，我已經建立了培養設備來研究新陳代謝的各個階段，以及在哪些條件下這些有機生物最芳香。

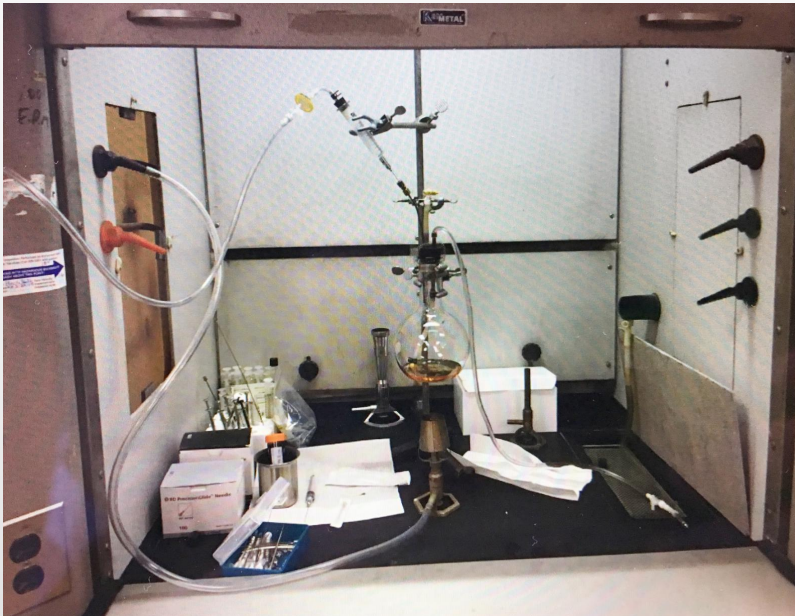




In Labor, I have not engineered genes into microbial production strains (as a synthetic biology approach would entail), but rather adjusted incubation conditions to fit these organisms of the human skin to maximize their particular scents.

The three custom bioreactors in the installation are monitored by a Raspberry Pi-based automation system that incorporates stirrers, biosensors, pumps, heaters, and valves to automate these conditions in a continuous production model.

It is important to me that this “labor” is performed live, it is a living process, and its product is produced in excess of that which could be created by human toil.



在此過程中，我並沒有把基因改造成微生物來產生菌株(這是一種合成生物學的方法所需要的)，而是調整培養條件，以適應這些人類皮膚的生物有機體，以最大限度地發揮他們的特殊氣味。

安裝的三個定制生物反應器由一個基於“樹莓派”的自動化系統監控，該系統包含攪拌器、生物感測器、泵、加熱器和閥門，以便自動化的連續作業。

對我來說，重要的是，這種“勞動”是活的（表演），它是一個活生生的過程，它所產生的超過了人類勞累所能創造出的（氣味）。

The installation also includes several sweat-stain-transfer prints—visual evidence of exertion captured by a novel production method. Moist, freshly soiled shirts are dusted with charcoal and pressed between paper at high pressures, which infuses the paper surface with an embossed pattern of intimate sweat.

In the first installation, each T-shirt was worn by a university student paid at the prevailing wage.

The sweat-stain-transfer technique produces evidential traces of individual excretion.

該裝置還包括幾個汗漬轉移列印——通過新奇的方法去電子捕獲其視覺證據。潮濕的，剛剛被弄髒的T恤撒滿碳粉在紙中間被高強度擠壓，使紙表面佈滿貼身衣物汗水的壓花花紋。

在第一裝置中，每個T-shirt被一名大學學生所穿著，並按標準工資支付。

這個汗漬轉移技術製作出了個人分泌物的證據痕跡。

Concept The idea of what exactly makes up a person is again under the microscope, not just for scientists, but for culture at large.

For centuries, we have been debating who gets to be considered a person and when: it is a question that dominates political discourse of the last few centuries because of the connection to labor and liberation in the post-renaissance world.

究竟是什麼構成了一個人，這個概念再次被置於顯微鏡之下，不僅對於科學家，對整個文化也是如此。

幾個世紀以來，我們一直在爭辯誰、什麼時候應該被認為是一個人：這個問題在過去幾個世紀的政治話語中佔據主導地位，因為它與後文藝復興時期的勞動和解放有關。





Labor reflects upon our changing understanding of what we are. Microbes in and on the human body vastly outnumber human cells and they help regulate many of our bodily processes, from digestive and immune systems to emotional and physiological responses like sweating.

Our microbiota is integral to who and what we are, and complicates any simplistic sense of self.

Likewise, the smell of the perspiring body is not just a human scent, unless we are willing to redefine what we mean by 'human.'

勞動反映了我們對自己（是什麼）的不斷認識變化。人體內外的微生物數量遠遠超過人體細胞，它們有助於調節我們的許多（新陳代謝）身體的進程，從消化系統、免疫系統到情緒和生理反應，就比如：汗水的排出。

我們的微生物群對於我們是誰以及我們是什麼是不可或缺的，並使任何簡單自我感知複雜化。

同樣地，身體出汗的味道不僅僅是人類的氣味，除非我們願意重新定義“人類”的含義。







The Labor project also reflects upon an industrial shift from human and machine labor to increasingly pervasive forms of microbial manufacturing.

Today, microbes produce a wide range of products, including enzymes, foods, feedstocks, fuels, and pharmaceuticals. They literally live to work.

These new industrial activities point to a deepening of the exploitation of life and living processes: the design, engineering, management, and commodification of life itself.

In Labor, the microorganisms ironically produce the scent of sweat, not as a vulgar ‘bi-product’ of production, like in factories of the 19th and 20th centuries, but as a nostalgic ‘end-product’.

Labor这个项目反射了一种产业转变从人力和机器的劳作到微生物制造形式的渐进渗透（越来越普遍化）

今天，微生物能制造生产出的产品范围很广，包括酶、食物、原料、燃料和药品。他们（表面意义）活着就是为了工作。

这些新产业的活动指向了对生命和生活过程的深层次开发：生命本身的设计、工程、管理和商品化。

In Labor, 具有讽刺意味的是，微生物会产生汗液的气味，而不是作为一种庸俗的“副产品”生产，就像在19世纪和20世纪的工厂一样，仅是作为怀旧的“最终产品”

As audiences contemplate clues within the installation, they will hopefully ponder perverse aspects of contemporary production like: life inseparable from labor, product and produce conflated, biology a subfield of technology, and “man” omitted from manufacturing.

当观众沉思于装置中的线索时，他们希望能思考当代生产中一些反常的方面，比如：生命与劳动密不可分，产品与生产相结合，生物学是技术的一个子领域，而“人”在制造中被省略。





作者主要觀點：

勞動（被剝削）的味道



散發氣味（每個人都不同）



體內的菌群的調解



通過藝術裝置

Non-human Labor



“人”在製造中被省略



菌群可以獨立於人體之外

人類的勞動“副產品”可以獨立存在



重新定義“人類”的含義

## Biography:

### Paul Vanouse (US)

Paul Vanouse (US) is an artist and professor of Art at the University at Buffalo, NY, where he is the founding director of the Coalesce Center for Biological Art. Interdisciplinarity and impassioned amateurism guide his art practice. His bio-media and interactive cinema projects have been exhibited in over 25 countries and widely across the US. Recent solo exhibitions include: Burchfield-Penny Gallery in Buffalo (2019), Esther Klein Gallery in Philadelphia (2016), Beall Center at UC Irvine (2013), Muffathalle in Munich (2012), Schering Foundation in Berlin (2011), and Kapelica Gallery in Ljubljana (2011). Other venues have included Walker Art Center in Minneapolis, New Museum in New York, Museo Nacional in Buenos Aires, Haus der Kulturen der Welt in Berlin, ZKM in Karlsruhe, and Albright-Knox in Buffalo. Vanouse's work has been funded by Renew Media/Rockefeller Foundation, Creative Capital Foundation, National Endowment for the Arts, New York State Council on the Arts, New York Foundation for the Arts, Pennsylvania Council on the Arts, Sun Microsystems, and the National Science Foundation. He has received awards at festivals including Prix ARS Electronica in Linz, Austria (2010, 2017) and Vida, Art and Artificial Life competition in Madrid, Spain (2002, 2011). He has an MFA from Carnegie Mellon University.

### 个人简介：

Paul Vanouse (US) 保罗·范诺斯

Paul Vanouse(US)是纽约水牛城大学的艺术家和艺术教授，他是生物艺术联合中心的创始人。他拥有卡内基梅隆大学艺术硕士学位。

跨领域与业余主义激情指导着他的艺术实践。他的生物媒体和互动电影projects已经在25以上的个国家以及横跨全美国展出。

近几年的个展包括：水牛城的Burchfield-Penny画廊(2019)；费城 Esther Klein画廊(2016)；加州大学欧文分校Beall中心(2013)；慕尼黑的 Muffathalle缪法塔勒(2012)；柏林Schering基金会(2011)以及卢布尔雅那的Kapelica画廊(2011)。

其他场馆包括明尼阿波利斯的沃克艺术中心；纽约新博物馆；布宜诺斯艾利斯国家博物馆；柏林世界村；德国KARLSRHUE卡尔斯鲁厄艺术与媒体中心；水牛城诺克斯美术馆。

他的作品资助由复兴媒体/洛克菲勒基金会；Creative Capital基金；国家艺术基金会；纽约州艺术委员会；纽约艺术基金会；宾夕法尼亚艺术委员会；太阳计算机系统公司以及国家科学基金会。

他曾在奥地利林茨和维达(2010年、2017年)ARS获奖；西班牙马德里艺术与人工生命竞赛(2002, 2011)获奖。



**keyword:**

**微生物； 菌群； 細菌 ； DNA/RNA； 免疫； 克隆； 有機體 . etc**

1.Copernican

Man was no longer at the center of the universe.

2.Darwinian

Mankind is not really separate from the animals and plants and other critters in the world.

3.Freudian

Human were not in fact rational . our behavior came from much more primitive and kind of unknowable other impulses. ( 無意識過程 生物的本能衝動 )

Symbiotic organism 共生有機體

Composite organism 復合有機體

是什麼促使人類的進化與人類的無意識 行為



我不是完全的我，妳也不是妳想像的全部的妳.....

我 是誰 人類進化成什麼樣子..... 是誰主宰.....