

# PORTOSCRIPT: FIND YOUR NORTH

A VISUAL AND LINGUISTIC STREET ART AND GRAFFITI RESEARCH PROJECT OVERVIEW

Laura Prikule, MA, MFA

UNIVERSITY OF LATVIA

The Research Project was implemented under the guidance of Full Professor Clara Maria Laranjeira Sarmento e Santos, Director of Centre of Intercultural Studies (CEI) at Instituto Superior de Contabilidade e Administracao do Porto (ISCAP)

# ABSTRACT

- The following text describes my field research of Graffiti in the streets of Porto, some of the theoretical findings I was drawn to, the article and visual essays I elaborated and **#Portoscript: Find the North**, a Practical Design Tool I developed for an enhanced experience of the urban traveler – a graffiti and street art flash card set. It also describes some of the methods I used and the outcomes I achieved.

# INTRODUCTION

---

From February to July 2023, I explored Porto City and the surrounding areas, using it as a research field, deciphering the information found in the city streets: the walls, pipes, lampposts, pavement, electrical enclosure cabinets and more.

---

Coming from a distant place and not knowing the local language I approached it as an unknown territory ready for discovery.

---

I searched for new paths in the cobweb, climbed the hills, avoided certain streets and extensively used others. I looked at street art as a portal to enter deeper levels of collective consciousness.

---

I examined graffiti, stickers, wall paintings, posters, marks, stencils, drawings, scratchings etc.

---

I wanted to find repeating patterns, hidden meanings, encrypted messages, and traces of journeys into the beyond.

---

I noticed that there were some words, that would repeat more and others – less. I took many photos. I did field research, based on an ethnographic approach and creative research methodology.

# LITERATURE REVIEW

- One of my principal sources of inspiration for the research was *REPOSITORY: 49 Methods and Assignments for Writing Urban Places* (Cristea et al, 2023)
- I also studied the ideas of resistance as a driving force behind many graffiti worldwide. For Awad et al. (2017) resistance appears in their research as both a highly personal act and one that necessitates and employs collective methods.

# RESEARCH STRUCTURE

## RESEARCH AS A TREE

If we look at the totality of my Research Process as a tree with roots, trunk, branches, needles, cones, and seeds, we can imagine its evolution, the ideas it is stemming from, the methods applied, the different branches it evolves into, and the final products it produces – cones with seeds.



# RESEARCH

## TOPIC

---

I chose the broader research topic: Street Art and Graffiti in Porto due to my artistic background and interest in different types of visual expression.

---

I also chose it because of my linguistic interests, which I am currently pursuing in Translation Studies, as writing and text has a major role in this creative path.

---

I am genuinely interested in different forms of resistance, as I firmly believe that people should voice their opinion more actively, if and when possible, and graffiti is about that.

# RESEARCH

## QUESTIONS

---

IS IT POSSIBLE TO LEARN PORTUGUESE FROM  
THE STREETS?

---

WHAT ARE THE MOST PROFOUND IDEAS  
HIDDEN IN THE STREETS?

---

HOW CAN THE USE OF AI IMPROVE GRAFFITI,  
STREET ART AND THE CREATIVE PROCESS NOT  
IMPACTING THE RESISTANCE SPIRIT?



# RESEARCH

## METHODS

---

Creative Research; Linguistic Research; Visual Research; Qualitative Research

---

Theoretical data studies (reading)

---

Data collection (sampling) in the streets (field research)

---

Data processing (image processing, text processing, translation)

---

Data distillation (leaving the essence and removing the unnecessary)

---

Interviews (formal and informal)

---

Dialogues with the Project Supervisor and PhD students

---

Contemplation of ideas

---

Dialogues with ChatGPT

# RESEARCH

## OUTCOMES

---

Image Bank (IB)

---

365 Quotation Samples + their translations on POST-Its

---

Original Artwork

---

AI based artwork

---

Interview, Scientific Article, and Poster

---

Visual Route Essays

---

Open Studio Event

---

Graffiti Glossary

---

Street Vocabulary A-Z (online prototype for printed version)

<b>?</b>	<b>IMAGE BANK</b>	<b>SAMPLES</b>	<b>POST-ITs</b>	<b>VISUAL ESSAY #1</b>
<b>RESEARCH BASED ART</b>	<b>IDEA TEXT</b>	<b>AI IMAGES</b>	<b>TALKS WITH CHAT GPT</b>	<b>INTERVIEW WITH AI</b>
<b>MAQUETTE</b>	<b>OPEN STUDIO</b>	<b>INTERVIEW WITH M. AMERIKA</b>	<b>POSTER</b>	<b>RESEARCH ARTICLE</b>
<b>VISUAL ESSAY #2</b>	<b>GRAFFITI GLOSSARY</b>	<b>STREET VOCABULARY</b>	<b>PORTOSCRIPT GAME</b>	<b>FUTURE IDEAS</b>
<b>PLANNED ROUTE</b>				

# IMAGE BANK

- I have collected these images throughout my research process. It is a wild mix of strong and weak art, meaningful and pointless text etc.
- Being an eclectic collection, it serves most of my visual and linguistic needs. It is a resource of visual data that nourishes my work.
- As the images were obtained in the streets of Porto it is also a mirror of a certain era in the city.

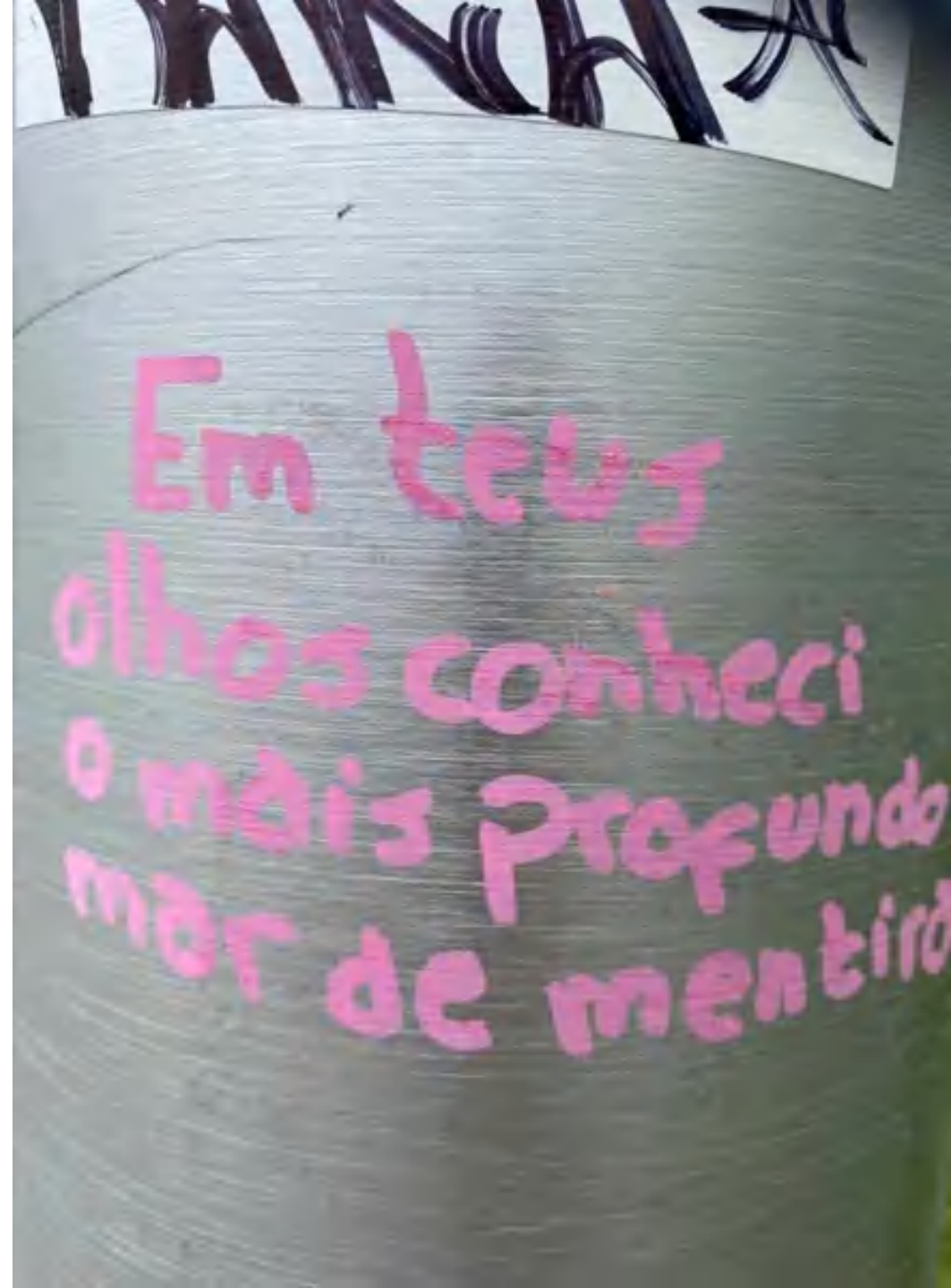


- All the images also have a geographic location included as part of the data, which helps to locate the points of interest

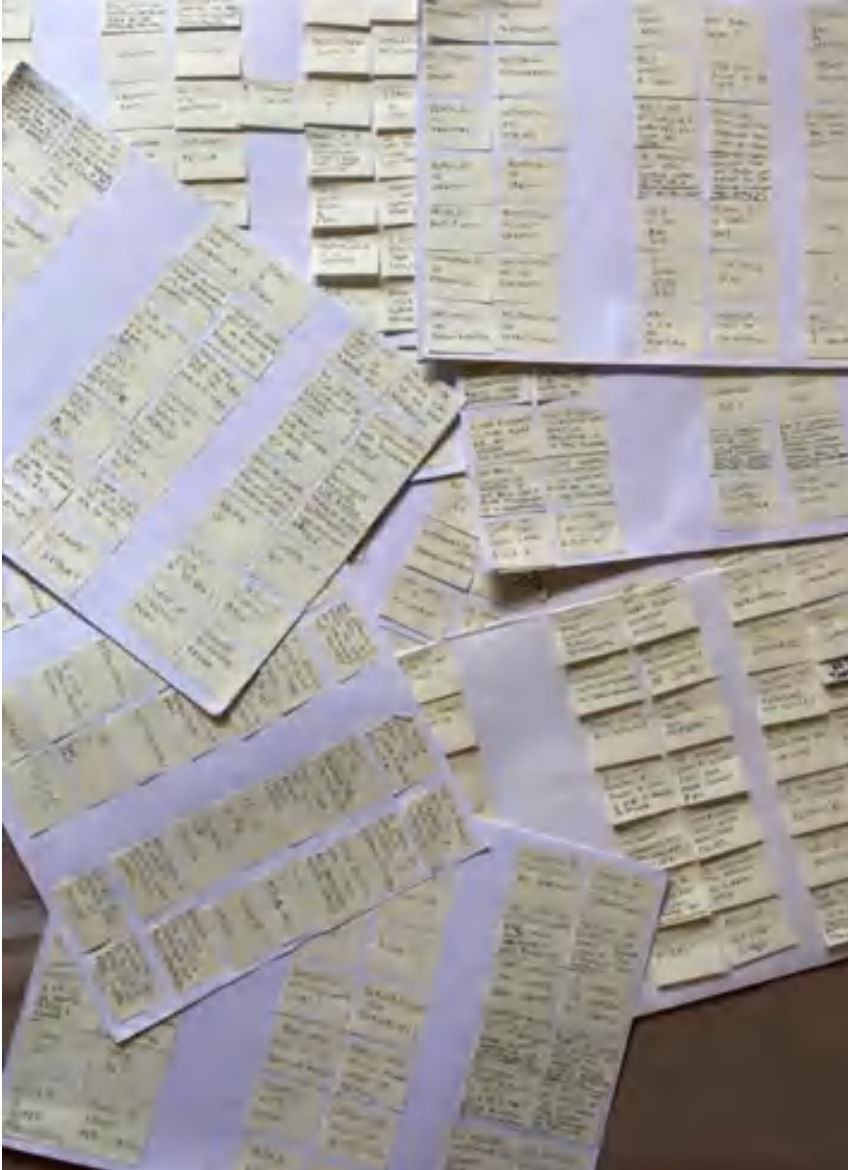


# SAMPLES OF TEXT

- From the images of the Image Bank, I have been extracting the text-dominant samples.
- Part of them do not have a big value in terms of how the information is presented, yet others do.
- They range from profound truths to sheer acts of vandalism and include everything in between these extremes.



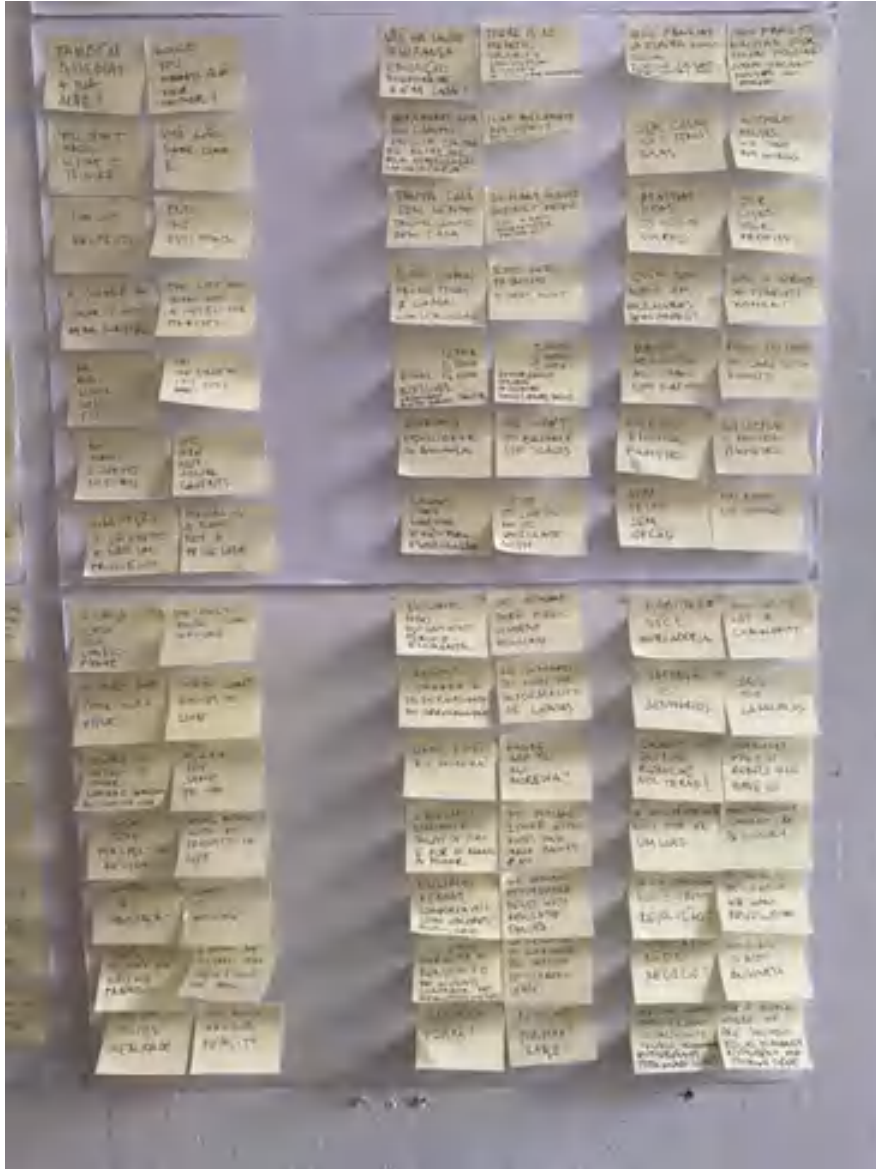




# 365 POST-ITS

---

- From these text images I have chosen 365 noteworthy samples of word-based information, which I have included in my analog text collection written on tiny Post-It sheets.
- To collect 365 quotations/words/texts from the streets of Porto was my initial goal. A conceptual task, it took several months to complete and was a hard mission.

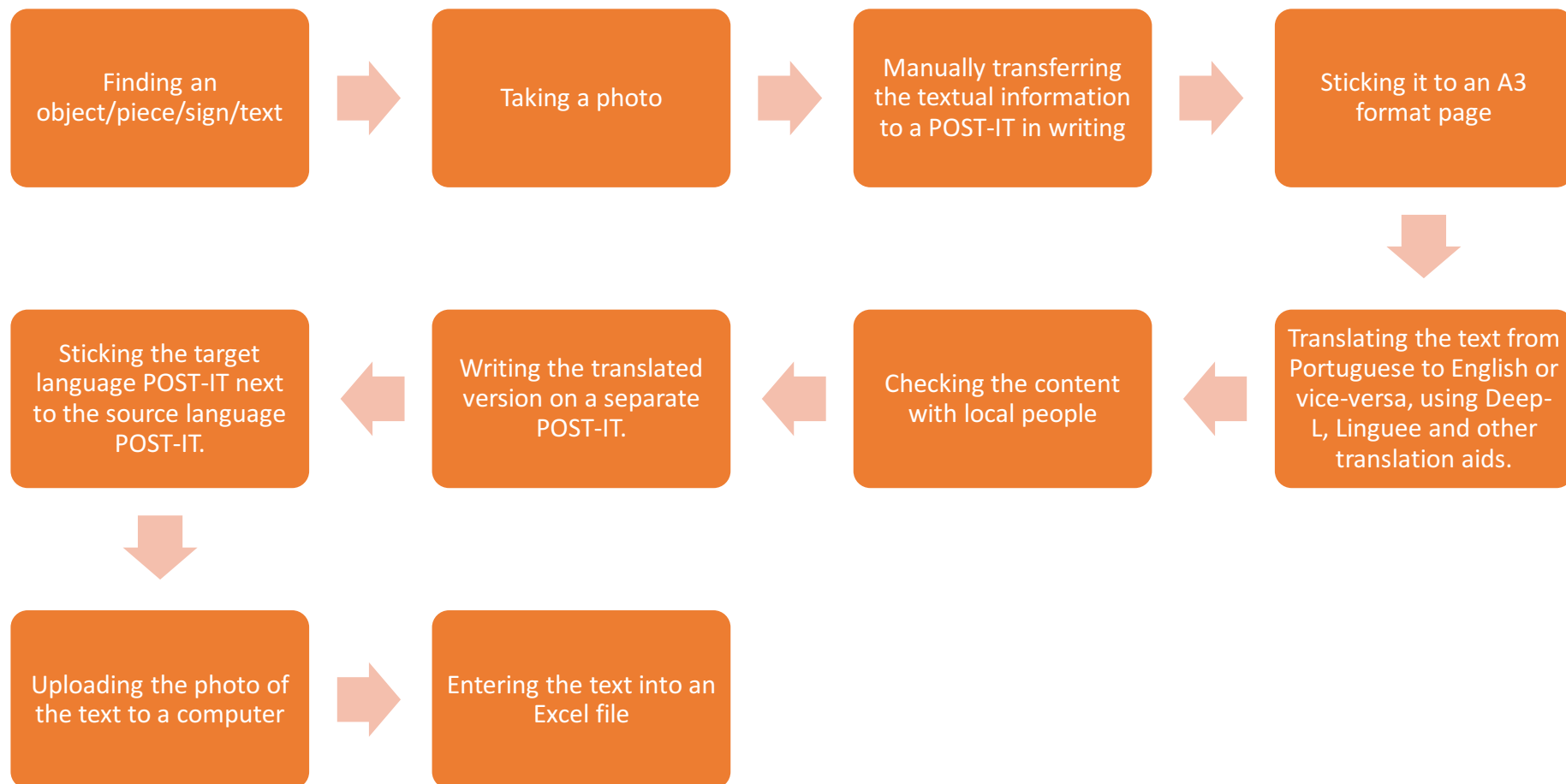


# AIM OF POST-ITS

- A self-developed method to delve deeper into understanding the Portuguese language and culture served this purpose quite well.
- Being a distilled version of the image bank, it focuses both on the fiction and non-fiction parts of the street works.
- The written word is central here.
- In the beginning, writing was also a complicated task, because I was not familiar with the Portuguese language, and largely had to rely upon my knowledge of Spanish
- Later, as I acquired also some formal and informal knowledge of Portuguese the process started to improve.



# Work-flow (Distillation)



# VISUAL ESSAY

The Visual Urban Essay is one of the first methods I tried from the “Repository of Methods” (Christea et al, 2023) and it is also the principal method I chose to work with.

According to Powels, “Today the term ‘visual essay’ is used for a variety of formats which have moved far beyond the paper-based pictures and text combinations or linear short movies. They vary in length and breadth from concise articles to book length contributions, from short clips to full length films on DVD or the web, from poster size compositions to room-filling exhibitions and art installations. In principle, a visual essay may consist of any type of static or moving visual or multimodal representation”.

## VISUAL ESSAY #1

In this essay I used the following approach: I combined the images from my Image Bank and the extracted text-samples or their English translations into a narrative remixing and “gluing” together the different layers of information, the different voices heard on the streets, producing a personal story, told in the first person singular (mostly) and plural (sometimes) form.

## **From Marqués to Rua do Monte Cativo**

**a visual essay**



**Making some detours.**

**Opposite direction. 444. The number of  
the Marques da Silva Foundation.**

**0303... eternamentemente.**

***Trempacamente.***

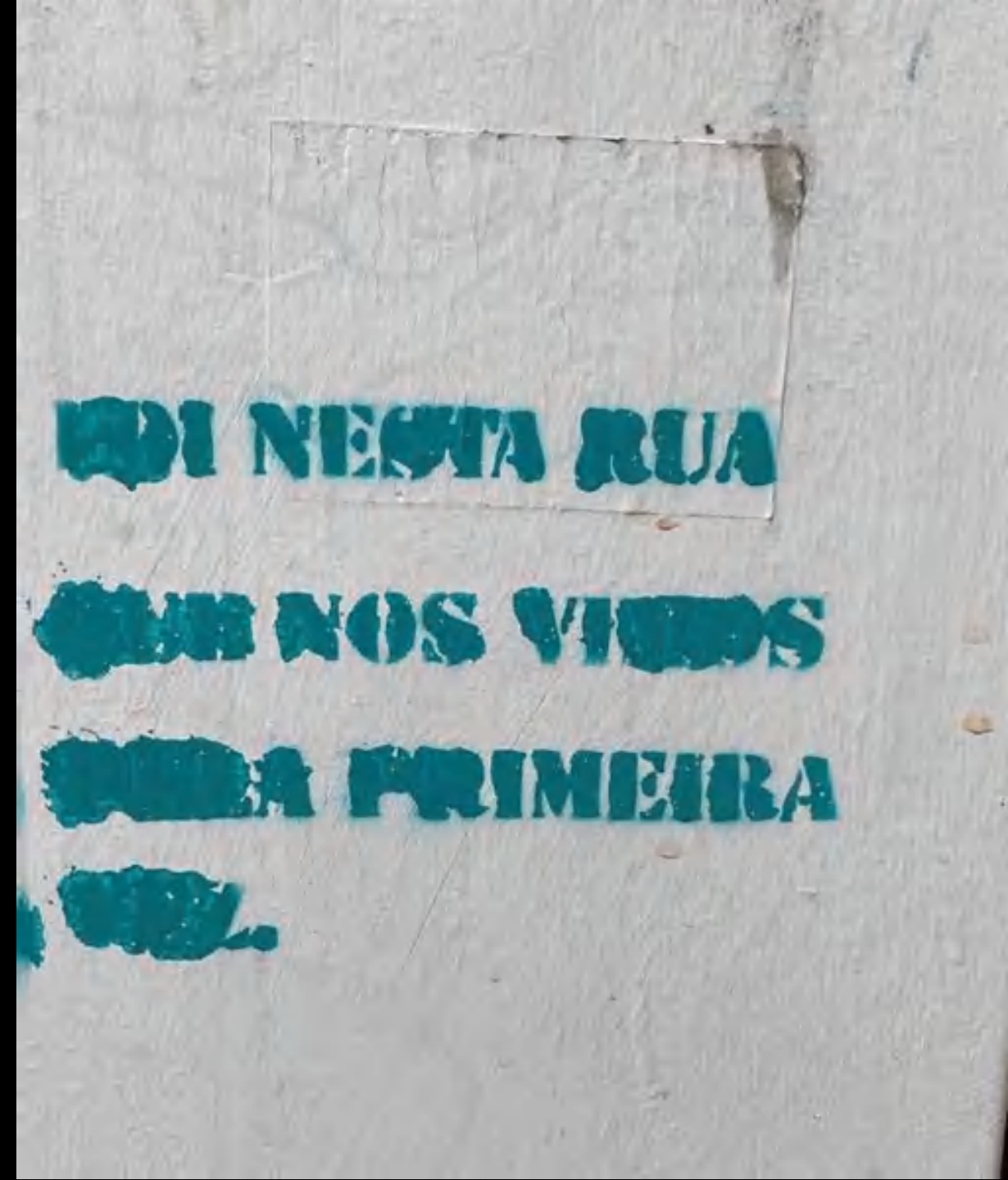
**Doing a flash tattoo. Robinnude.**

**Obsession.**

**By a guy who loves Cristina.**

**“Lule” means “floral” in Albanian. Screw  
this speculation.**

**Close the gymnasiums, and teach  
personal defense. This is THE street we  
Saw each other for the first time. Contact  
us.**







Watch the juggler on the crossing

As he drops a ball or two time

And again.

The angst, the tears, and *Saudade*.

An image by somebody

Named “the Caver”.





**(A skull face and another figure in blue)**

**War text. Vortex. Of letters. Off.**

**It is not normal to be afraid**

**To walk alone on the street.**

**Or laugh.**

**Some choices of guitars, the pink one is the  
smallest.**

**Esta, eesta, esta. Paz. Capacidad.**

**More blue figures. Tightly together.**

**My name is hot.**



**24 HOR**

ra: 91 026 20 94

**STOCK**  
**LOJAS • SAPATOS**  
**ROUPAS • PERFUMES**  
**PAPELARIA • BIJUTARIA**  
**E OUTROS**  
**NÃO COMPRO COISAS USADAS**  
**COMPRO CARROS USADOS**  
**926 184 809**

11/10

CRISTINA R. PORTO  
DA VIGILIA NAS REDES

e a nós,  
tar pela  
o, hoje!

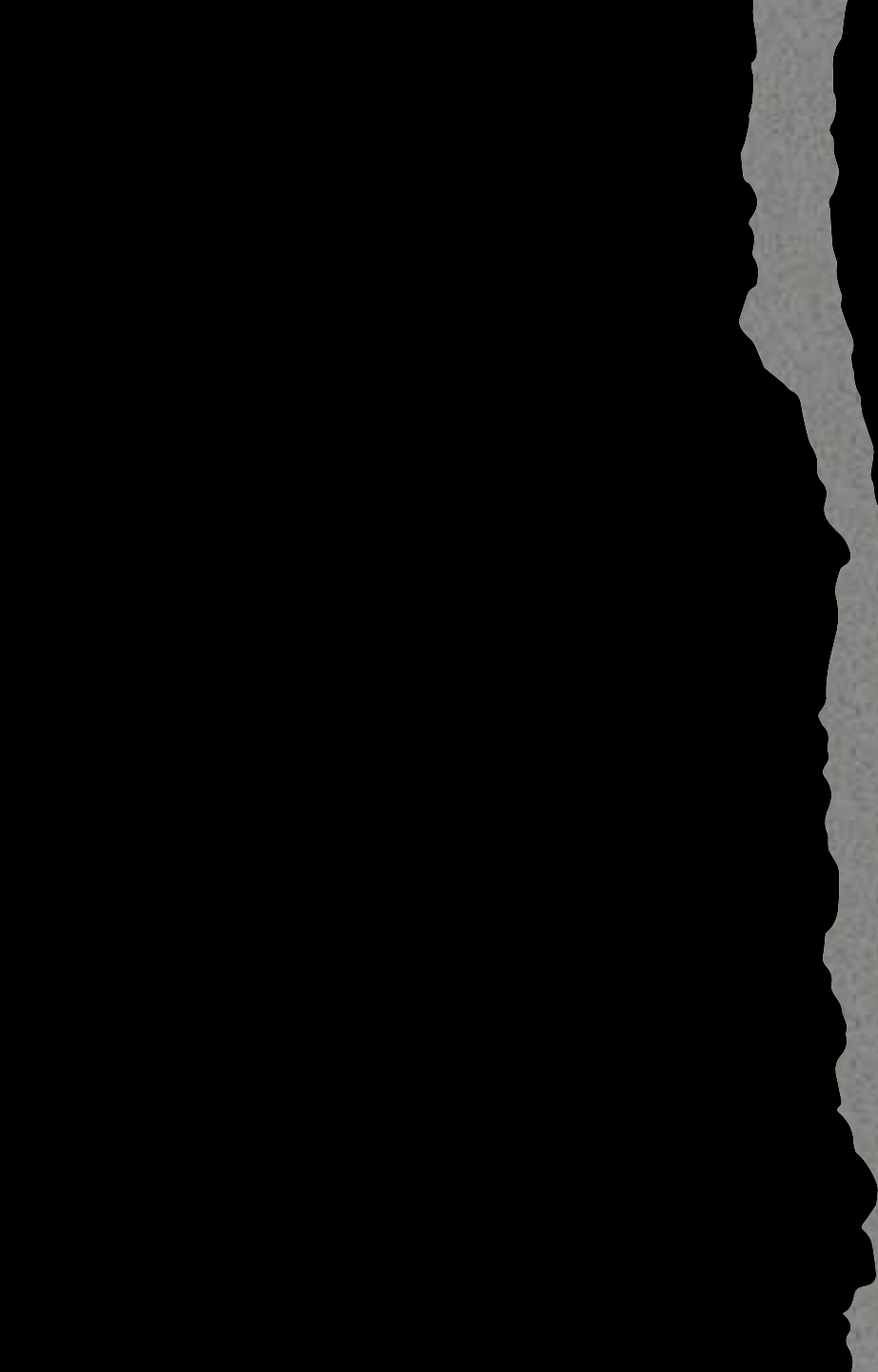
o direito à Habitação será um símbolo de união

acesso à saúde e à educação, reivindicamos o  
democrático de todos a uma habitação digna.  
Habitação não pode ser mercadoria! Ter uma casa digna  
não pode ser um privilégio, todos precisamos de um tecto  
para viver, para ter acesso a todos os outros direitos.

Junte-te a nós, vamos lutar pela **Habitação, Hoje!**







**A blue lego cross.**

**Estripadores malditos.**

**Lynx, a green mouse next to a  
green tree, and more graffiti**

**It is spring H284JE**

**Paci en cia. Paciencia. Patience.**

**Performing Patience.**

**Recharge the energies. Hoje  
Fasco por mim. Are you  
Suffering from eviction?  
Fuck money, get likes! And go  
To Clube de Campismo do Porto.  
Buy socks. Or stocks. And smile.  
Luster. Faces of  
the security.**





**A city as a giant scrapbook. A phasis. Abrasion.**

**In case of rain, the sun is here!**

**Behind these doors the sun.**

**Tiles. Fortune teller of love.**

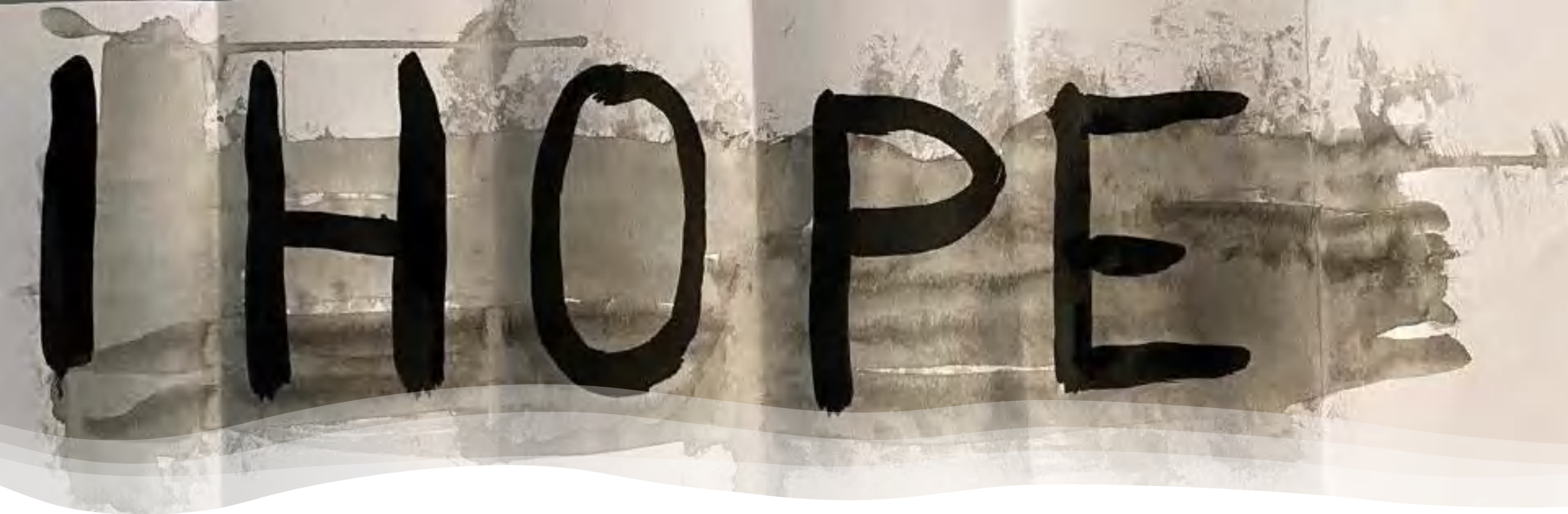
**All people loved**

**Get a 3-day warranty.**



**Fresh strawberries.**





## ART RESIDENCY DE LICEIRAS 18

During this time period at DE LICEIRAS 18 Art Residency, I surrounded myself with all the results of my research I had at that point, actually living in the same space.

It was a live-in science installation involving blending the borders between found text and images and other work I created or planned to create. It gradually turned into an idea cube where I was both a maker and an observer.



# MAQUETTE

- As part of my process, I also built a maquette for a potential exhibition that would incorporate parts of my research process. Later I applied some of the aesthetics I discovered in the process to my glossary, dictionary and card design.



# OPEN STUDIO

- What did I show? Research Post-Its, Research questions, Quotations and thoughts, Maquette, Street demonstration, Housing scam documentation, AI-Interview, AI work, Visual Essay, i-PIECE.





## GRAFFITI GLOSSARY

This glossary examines the key graffiti terms and shows images from Porto with actual samples of the terms. An English and Portuguese version is provided where applicable, but mostly the terms are used in English. I have also created an English/Latvian version of the same material.

## **STREET ART AND GRAFFITI TERMINOLOGY**



A photograph of a concrete wall heavily covered in graffiti and street art. The graffiti includes various tags, letters, and stylized figures. A prominent yellow figure is on the left, and a red figure is on the right. The wall is situated next to a body of water, with a small waterfall visible at the bottom right. The text "STREET ART AND GRAFFITI TERMINOLOGY" is overlaid in white, bold, sans-serif font. An orange horizontal bar is at the bottom of the image.

# STREET ART AND GRAFFITI TERMINOLOGY

# Definições

Lei n.º 61/2013, de 23 de Agosto

## GRAFITOS, AFIXAÇÕES, PICOTAGEM E OUTRAS FORMAS DE ALTERAÇÃO

Para efeitos do disposto na presente lei, entende-se por:

- a) «Afixação» a fixação, com a utilização, designadamente de autocolantes, cartazes, posters, placards ou de outros meios, ainda que tenham carácter artístico, decorativo, informativo ou outro, efetuados através da utilização de técnicas que permitam, de uma forma duradoura, a sua conservação e visualização por terceiros, colocados nas superfícies a que se refere o n.º 1 do artigo anterior e que defrontem com a via pública, sejam elas de acesso público ou de acesso restrito, ou nela se situem;
- b) «Grafitos» os desenhos, pinturas ou inscrições, designadamente de palavras, frases, símbolos ou códigos, ainda que tenham carácter artístico, decorativo, informativo, ou outro, efetuados através da utilização de técnicas de pintura, perfuração, gravação ou quaisquer outras que permitam, de uma forma duradoura, a sua conservação e visualização por terceiros, apostos nas superfícies a que se refere o n.º 1 do artigo anterior e que defrontem com a via pública, sejam elas de acesso público ou de acesso restrito, ou nela se situem;
- c) «Mobiliário urbano» os objetos ou equipamentos instalados na via pública ou em espaço público, para uso dos cidadãos, ou que sejam utilizados como suporte às infraestruturas urbanas essenciais, designadamente de saneamento básico, de energia, de telecomunicações e de transportes;
- d) «Picotagem» a alteração da forma original de superfície a que se refere o n.º 1 do artigo anterior, por meio de perfurações ou impactos, ainda que tenham carácter artístico, decorativo, informativo, ou outro, efetuados através da utilização de técnicas que permitam, de uma forma duradoura, a sua conservação e visualização por terceiros, realizados em locais que defrontem com a via pública, sejam eles de acesso público ou de acesso restrito, ou nela se situem.



## TAG / TAG

ASSINATURA SIMPLE do nome ou apelido do grafiteiro

- Geralmente em uma cor
- Forma mais primitiva

*The signature of a writer – a line graffiti in one color with calligraphic and/or styled letters. Many famous sprayers use short synonyms – like “Daim” or “Seen”.*



# THROW-UP (THROWIE)

---

- 'Vomit'
  - Done rapidly
  - Rounded, deformed letters
  - Little variation in colour
  - Usually in 2 colours
- 



# BLOCKBUSTER

- Utilizado para cobrir o máximo de área num curto tempo
- Letras grandes e em formato de bloco
- 2/3 cores de tinta
- Pode ser conseguido com rolos de pintura

- A blockbuster goes up one more level of sophistication from a throw up. It is much bigger and often fills up an entire space, such as a wall
- However, like a tag and a throw-up, a blockbuster is still produced in a relatively short period
- The lettering of a blockbuster is often created in a block style, and the writer may use rollers







# WILDSTYLE

- Style of graffiti where the letters are interlaced
- Multiple colours
- The final result of wild-style is illegible or psychedelic letters
- Usually includes arrows or other design elements
- One of the most complicated styles







# PIECE/PEÇA

---

- Abbreviation of “master-piece”
- A piece done by a specific artist
- Uses more than 3 colours

## PIECEBOOK / BLACKBOOK /WRITER’S BIBLE

- The graffiti writer’s sketchbook

## OUTLINE

A drawing done in the piecebook

# BUBBLE LETTERS

Bubble-shaped letters







# BURNER

A high quality graffiti





CROSS OUT/'CROSSAR'



## CHARACTER / BONECO

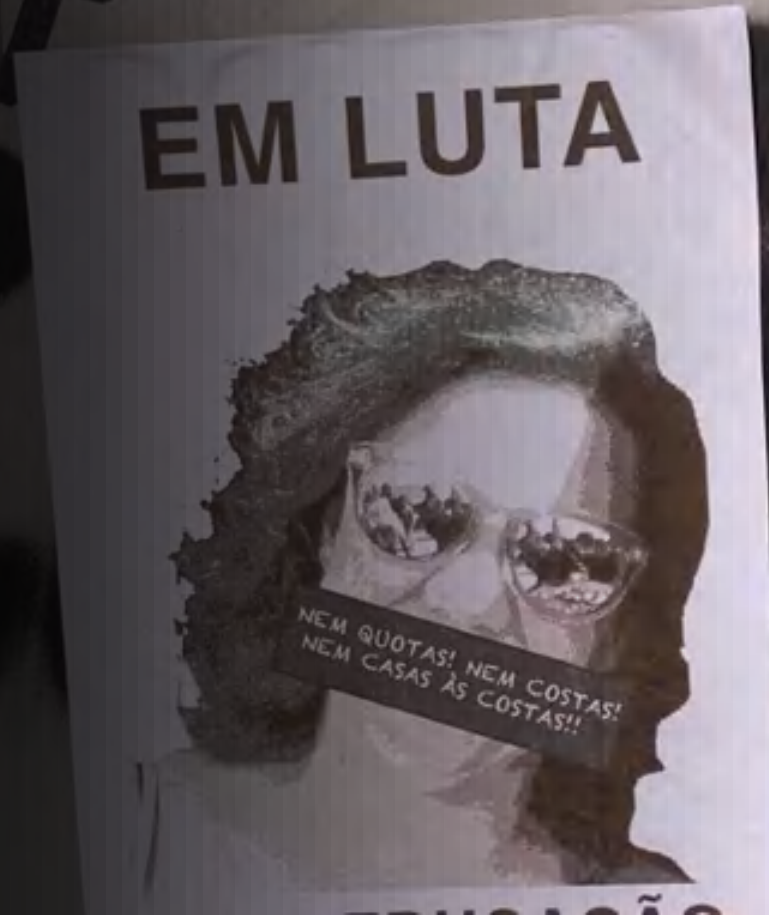
---

- A piece showing a living being/  
character



## WHEATPASTING/ PASTE-UP

- It is a technique that street artists use to quickly put up their works
- Posters, drawings and paintings on paper are pasted on the walls
- It involves the use of a paste composed of flour (preferably wheat flour)

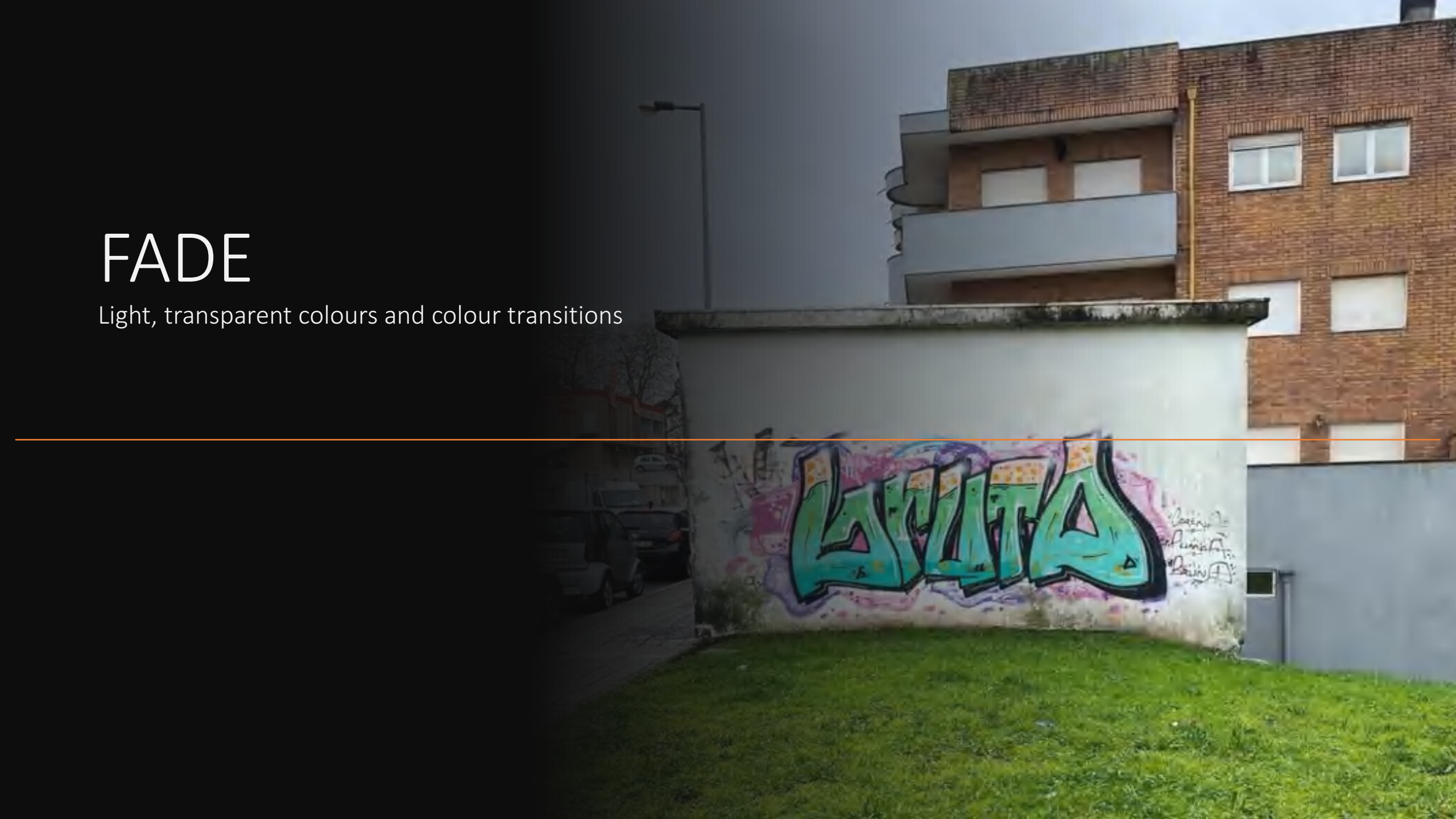




# FADE

Light, transparent colours and colour transitions

---





FILL-IN  
OUTLINE  
SHADOW /

PREENCHER, PINTAR  
CONTORNA  
SOMBRA

---



# STENCIL ART

---

- Stencil is a painting technique used to apply a design to any surface
  - Cut from paper, plastic, metal or acetate
- 



# BOMBING

---


Doing Illegal graffiti

## STICKER BOMBING

A type of 'bombing' in public space using stickers

---

os sinais no passeio  
impedem os  
guarda-chuvas



@filhobastardo\_

YARN BOMBING /  
YARNBOMBING /

- Handicraft work with yarn, adorning bridges, trees, bicycles etc.



Done by a a writer or a crew. Often involves some characters

# MURAL



# STREET ART / ARTE URBANA

- Arte Urbana ou Street Art é a expressão que se refere a manifestações artísticas desenvolvidas no espaço público, distinguindo-se das manifestações de caráter institucional ou empresarial, bem como do mero vandalismo. A princípio, um movimento underground, a street art foi gradativamente se constituindo como forma do fazer artístico, abrangendo várias modalidades.



# FAT CAP / SKINNY CAP

---

- The Fat Cap is used for making wide lines (min. 3 cm)
  - The Skinny Cap is used for contouring, fine lines
- 



# GUERILLA ART / ARTE DE GUERRILHA

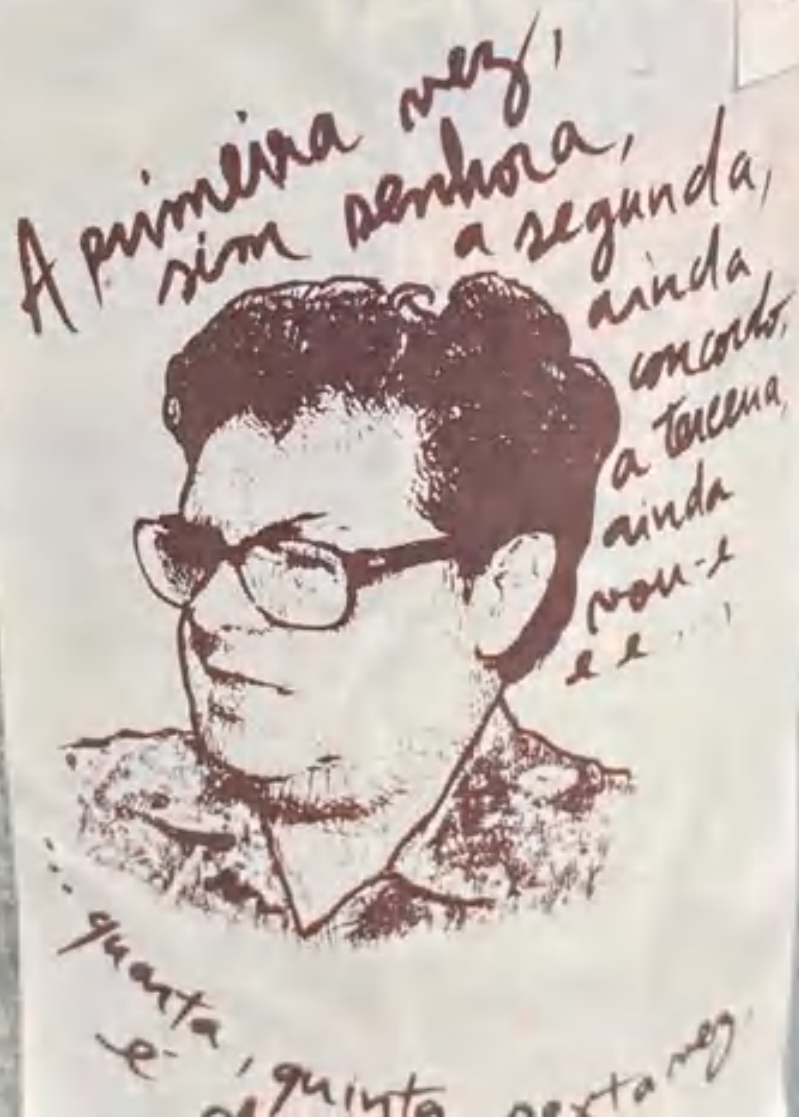
---





## STICKER ART / GRAFFITI DIGITAL E STICKERS

---







# Nikolai Novikov

Schmuck With a Sticker



/BOTTLEOFYOGURT



/BOTTLEOFYOGURT



@BOTTLEOFYOGURT



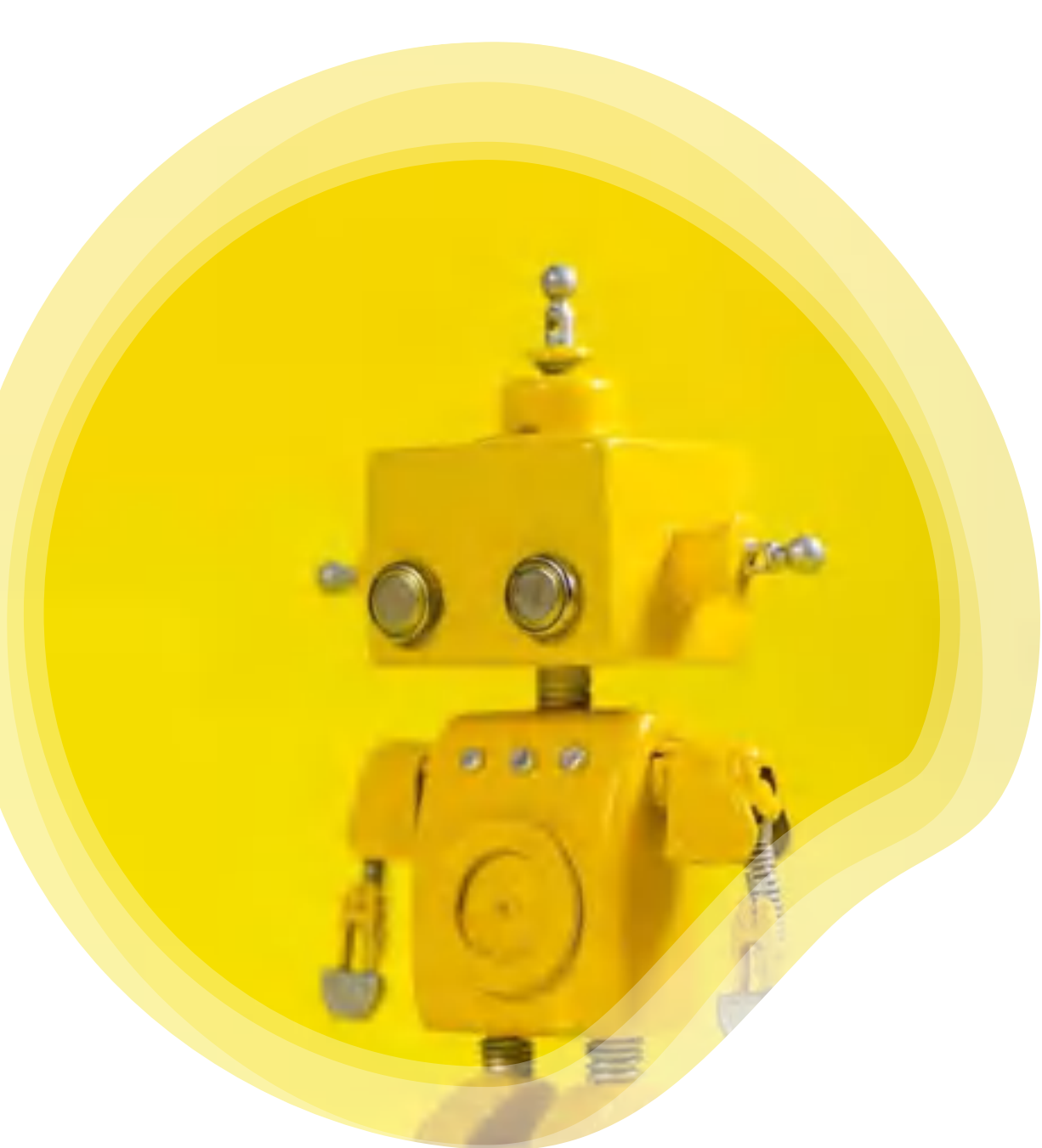
# KING

A graffiti artist who is on the top of the hierarchy



## CREW

- Group of graffiti artists coming together to paint at the same time and place



## TOY

- Beginner graffiti artist, inexperienced
- Someone who does graffiti just because it is trendy
- 'trouble on your system'



# BUFF

- A term used when a piece or a 'bomb' is removed

## BUFFER

- A person who removes a piece

# AZULEJOS/ TILES

---



# BITE

To imitate or copy the style of another graffiti artist



# HANDSTYLE

---

Handstyle is a term in graffiti culture that denotes the unique writing style or signature/mark of a graffiti artist.

# CALLIGRAFFITI / KALIGRAFITI

- GRAFFITI + CALLIGRAPHY

# ETCHING / SCRATCHING



## SCRATCHITI

---

Type of graffiti in which an image is etched/scratched into a surface (glass or plexiglass).



---

# REVERSE GRAFFITI / GRAFFITI REVERSO

---

- Reverse graffiti is a simple method: “removing” existing elements from a surface to form images.
- The drawing on the wall or other surfaces is formed by removing dirt from it (for example, writing WASH ME! on a dirty car)

?

REMOVING (letters) / Remoção de letras



# BROKEN WINDOWS THEORY /TEORIA DAS JANELAS PARTIDAS

---

- “Se apenas uma janela de um prédio fosse quebrada e não fosse imediatamente consertada, as pessoas que passassem pelo local e vissem que a janela não havia sido consertada concluiriam que ninguém se importava com isso, e que em um curto espaço de tempo todas as demais janelas também estariam quebradas, pois as pessoas começariam a jogar mais pedras para quebrar as demais janelas. Em pouco tempo, aquela comunidade seria levada à decadência. Abandonado, o local seria ocupado por pessoas viciadas, imprudentes e com tendências criminosas. A comunidade seria abandonada e tomada por desordeiros”
  - The broken windows theory states that any visible signs of crime and civil disorder, such as broken windows (hence, the name of the theory) vandalism, loitering, public drinking, jaywalking, and transportation fare evasion, create an urban environment that promotes even more crime and disorder (Wilson & Kelling, 1982)
- 







# VISUAL POLLUTION / POLUIÇÃO VISUAL

---





PV

- Visual pollution refers to the visible deterioration and negative aesthetic quality of the natural and human-made landscapes around people and to the study of secondary impacts of manmade interventions
- A poluição visual é um tipo de poluição moderna, encontrado nos grandes centros urbanos, uma vez que designa o excesso de informações contidas em placas, postes, *outdoors*, *banners*, cartazes, táxis, carros e outros veículos de anúncios, além da degradação urbana fruto do excesso de fios de eletricidade e acúmulo de resíduos.



# REFERENCES /REFERÊNCIAS

- <https://www.eden-gallery.com/news/graffiti-styles>
- <https://gembh.wordpress.com/2009/05/21/205/>
- [https://academia.lndb.lv/ftp/200/balode\\_elna\\_20113406.pdf](https://academia.lndb.lv/ftp/200/balode_elna_20113406.pdf)
- <https://blog.grancursosonline.com.br/teoria-das-janelas-quebradas-broken-windows-theory/>
- Pointdaarte.webnode.come.br
- <https://agrcanelas.edu.pt/ambiente/poluicao-visual-sonora/>
- <https://www.historiadasartes.com/nomundo/arte-seculo-20/arte-de-rua/>



## VISUAL ESSAY #2

In this essay I used the following approach: I combined the images from my Image Bank and the extracted text-samples or their English translations into a narrative remixing and “gluing” together the different layers of information, the different voices heard on the streets, producing a personal story, told in the first person singular (mostly) and plural (sometimes) form.

## A Walk from Matosinhos to Foz



A Walk from Matosinhos to Foz

It is an ordinary day  
in Matosinhos

The weather is fine,  
and I play some  
beach tennis

There are waves

There is some wind

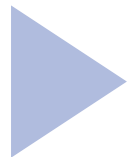
After a few hours of  
playing beach tennis I  
decide to have a walk



- I go along the beach.
- I see cliffs, I see boats, I see waves



There are  
some  
people



Some  
walk,  
others  
have bikes





The sun is very bright, so I  
try to find some big trees.  
I am looking for a shade.





I see a big wall with graffiti

It is something between wildstyle  
and blockbuster

The colours are white, pink and red

There are some lines and dots

It looks good





And there are a few more  
Looks like blockbuster style  
And there is another.  
It is in a spot that is not easy to access





Further on there are some simple tags



I also see a  
monument



It is a big poster. A WORLD  
WITH A VIEW TO ANOTHER  
WORLD, it says



I walk on. There is a place with  
benches and lamps






And a jetty





- I find a nice old house  
It looks a bit magic



 NORDICO say the  
letters on the nearby  
wall

---





Peut etre. Peut etre

---



An abstract block-face looks at  
me and I look back at the face

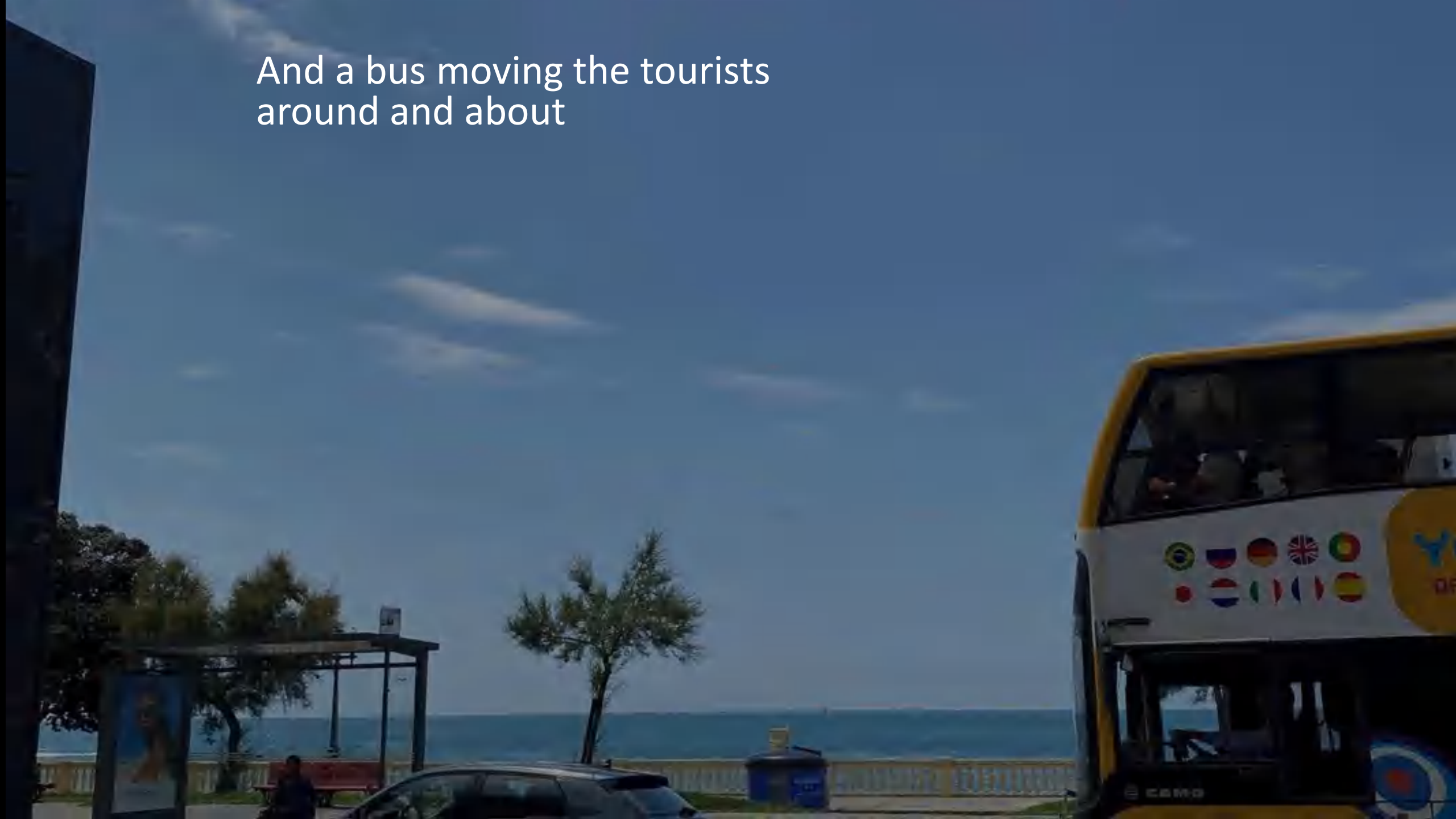


There is a poster in blue





And a bus moving the tourists  
around and about





Priority mail from  
the states. We live in  
difficult times





Even if the grass is still green







Somewhere between  
the legal and illegal



Sometimes I think  
geometry can save the  
world







Or may be art?

It is good to pay attention  
to things, anyway



And not to walk with  
eyes closed







---

To be strong like the  
sea or the fortress



Or just go with the flow







Be physically fit

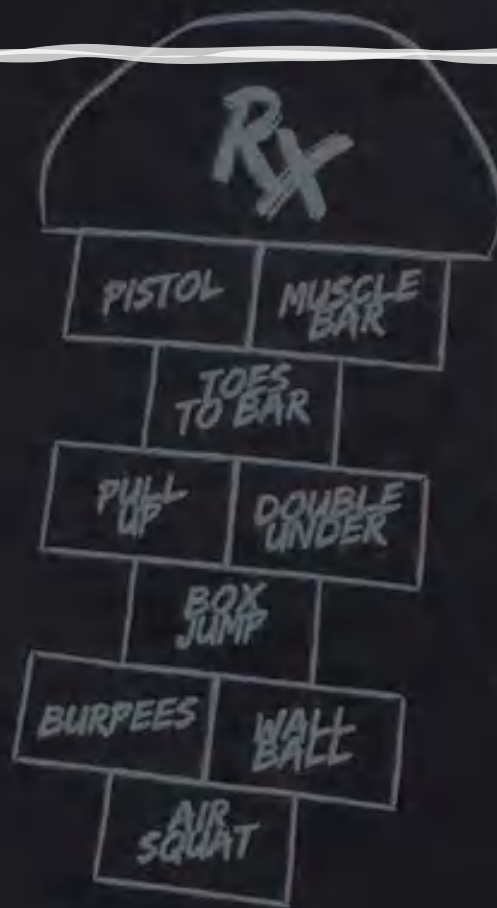




Take some time to smile

---

Train or play games





Or go and  
dig some  
gold







It is great to communicate  
with the city

---

And to let the city communicate with you

---





But do not forget

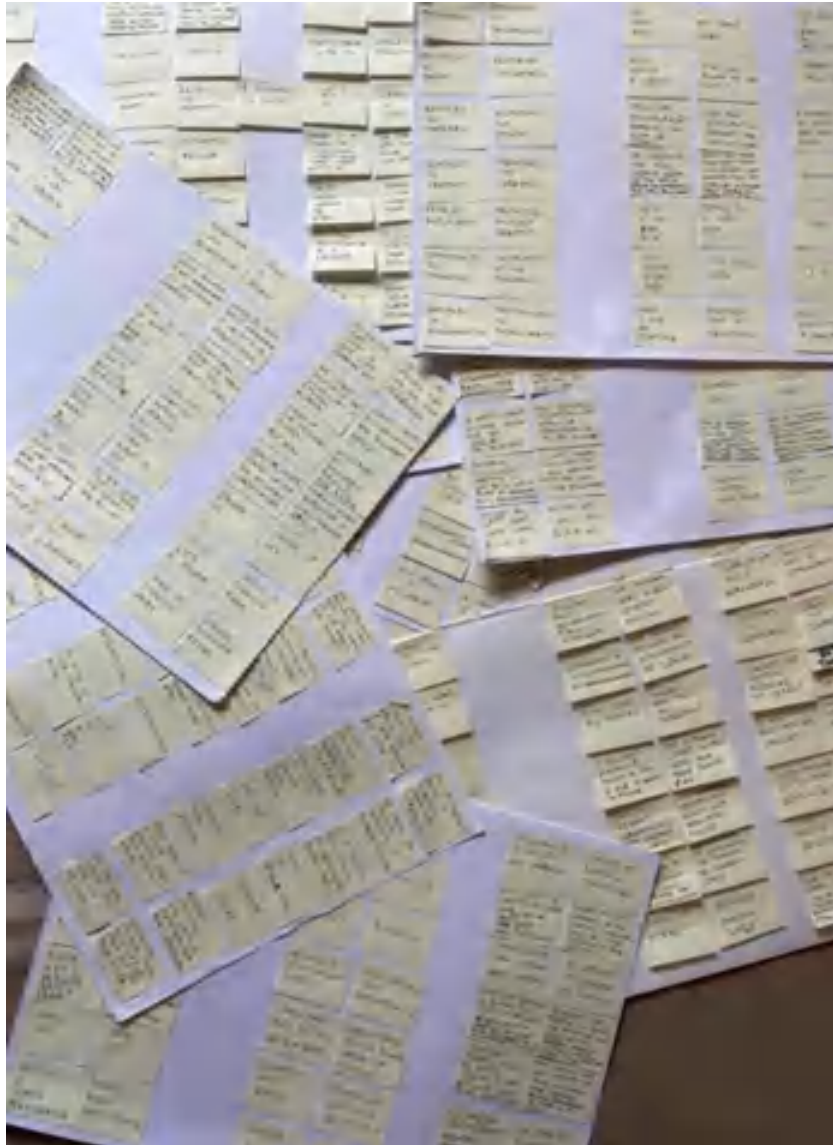
AS GRANDES TRANSFORMAÇÕES SÃO SEMPRE INTERIORES



And it is important to know,  
what you want to build.







---

## STREET VOCABULARY

- This is the next stage of distilling the primary images. After obtaining the 365 text samples I started analyzing which letters are more represented on the city walls and which less. I understood that certain letters like P, L, R have a wide vocabulary to choose from while X, Z, K are heavily under-represented.



# STREET VOCABULARY

ABRIL / APRIL

AMOR / LOVE

AQUI / HERE

ARRENDAMIENTO / RENT

AUMENTO / INCREASE

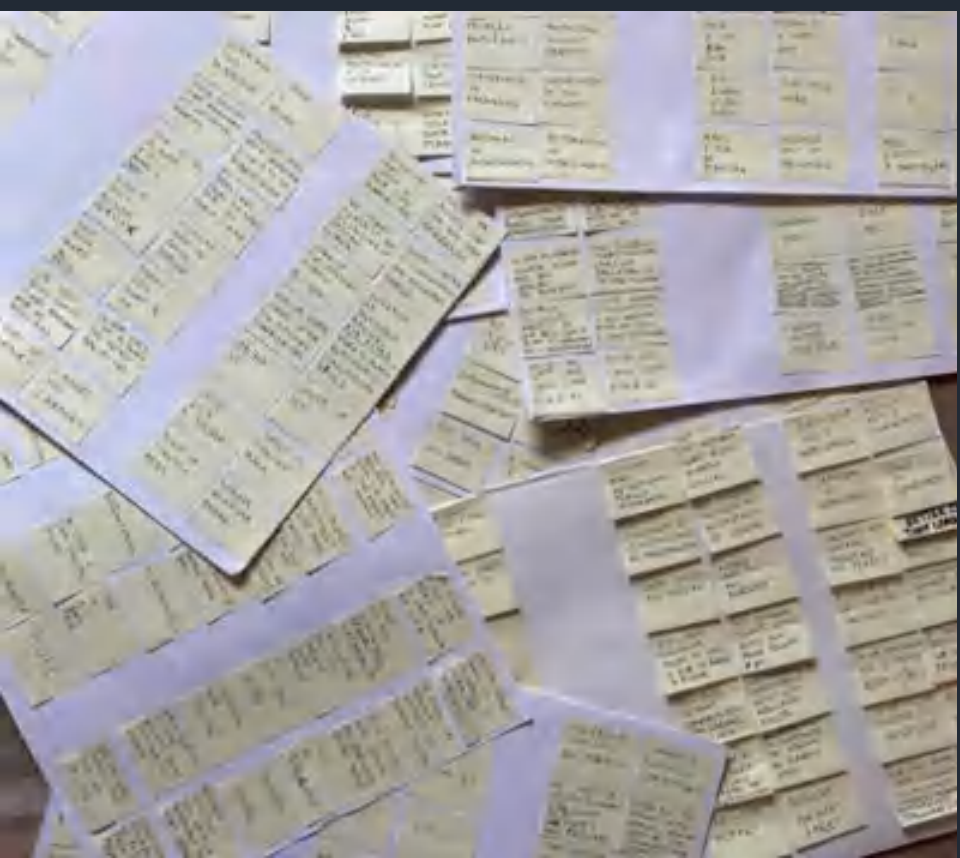
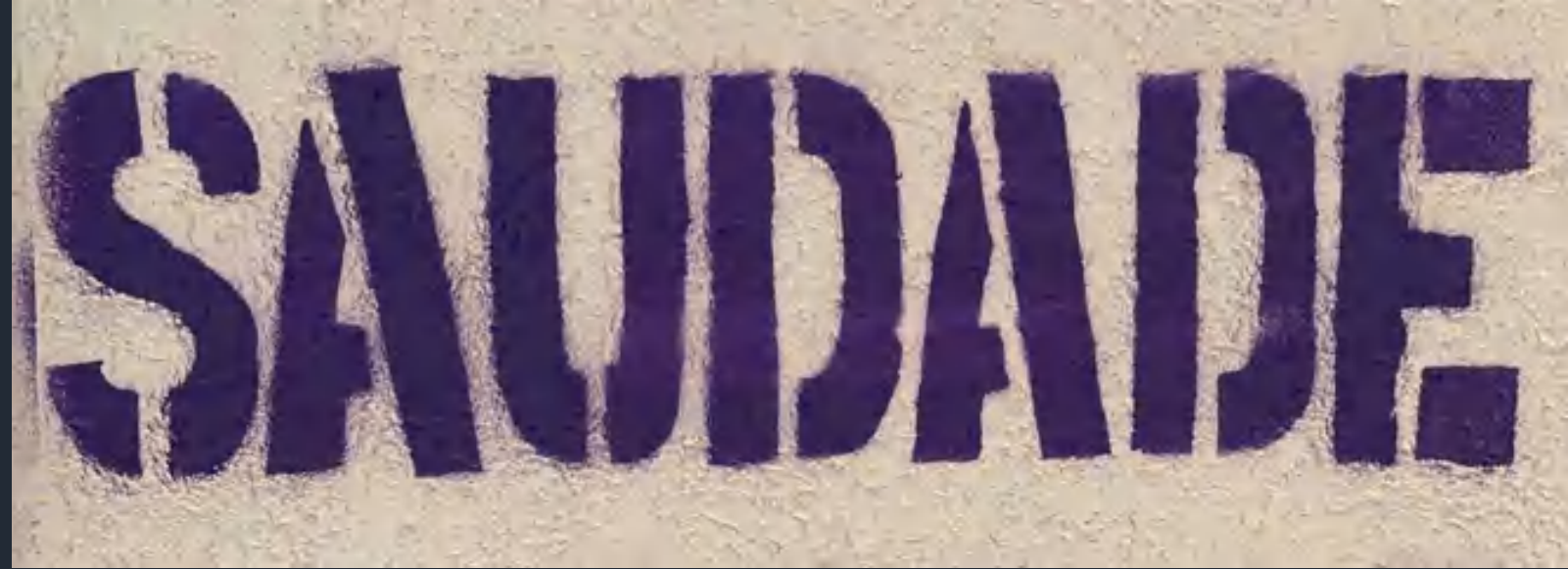
# STREET VOCABULARY

## Word selection process and criteria

### Objective criteria

- all these words have been found in the streets of Porto (graffiti, stickers, writings on walls, etc.)
- words that are frequently repeated are given priority (rua, vida, habitar, futebol, amor, etc.)
- they cover different areas of life (politics, housing, relationships, emotional reactions to events, resistance to and criticism of the existing order, resident insights/ messages to the world, the process of growing up, the impact of tourism on urban life)
- they serve as today's footprint of life in Porto and beyond, local and universal issues meet

## STREET VOCABULARY



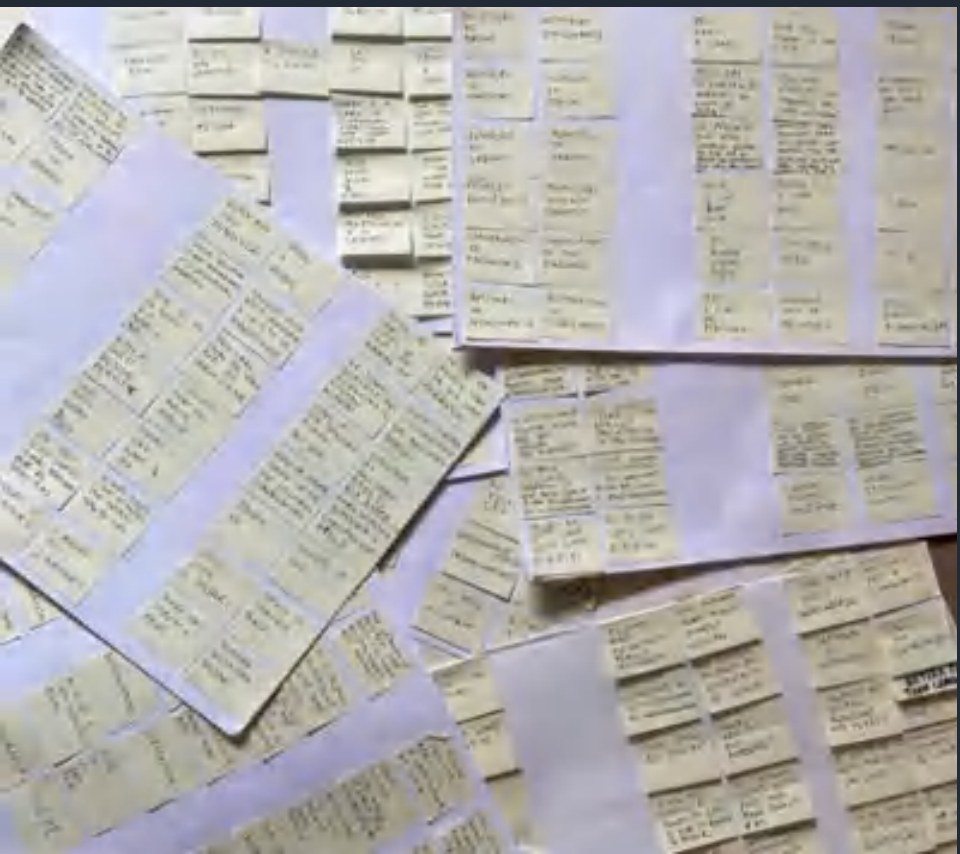
### Subjective "poetic" criteria:

- rare and untypical words which may seem useless, but are necessary to add to the overall feel of the dictionary
- words evoking strong associations
- words that do not have a specific meaning, but look or sound good



## STREET VOCABULARY

# ESTAMOS A ESCREVER UMA NOVA HISTORIA



### Thought selection process and criteria

- The thoughts are the verbal part of the data collected in the streets. Each thought contains a word starting with the appropriate letter of the alphabet. The scope of thought source material is wide, ranging from primitive marks left on the wall or simple stickers to text contained in stencils, pieces and murals.
- Although I appreciated a lot some of the more elaborate and well-crafted solutions, I paid particular attention to find interesting ideas in places that are not that obvious or instantly prominent.

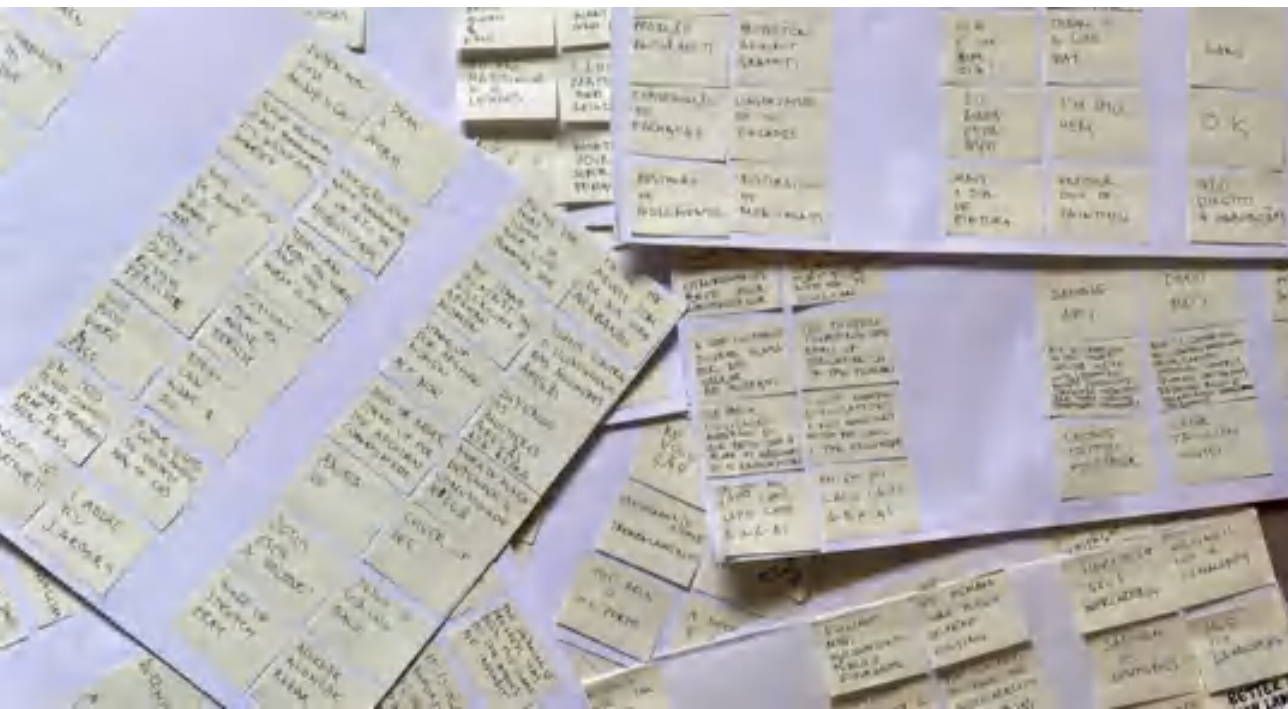


## STREET VOCABULARY

### Image selection process and criteria

• The images are the visual data I collected in the streets, and they may or may not contain text. They serve as a visual stimulus activating the senses of the viewer and contain a powerful visual element. For the images featured in the set of cards, I applied the following selection “filters”:

- the image is vertical
- it has good resolution
- it interacts with the letter/word/thought, yet does not directly illustrate it
- both the image contained and the image itself is powerful



# PORTOSCRIPT: FIND YOUR NORTH

Based on the presentations I developed previously, I created a prototype for an urban exploration flash card game #PORTOSCRIPT. To develop it, I used the collections of graffiti and street art images I have collected, as well as the texts, thoughts and individual words I have extracted from these images. It is based on the extended Latin alphabet from A to Z.



## PORTOSCRIPT: FIND YOUR NORTH

The set of cards can  
be used in several  
different ways,  
serving as:

---

a language learning tool

---

an aid for city exploration

---

an object for inspiration or reflection

---

an intellectual or visual stimulus

---

for cultural studies

---

a brief overview of Porto underground culture

---

an anarchist's guide to places and ideas

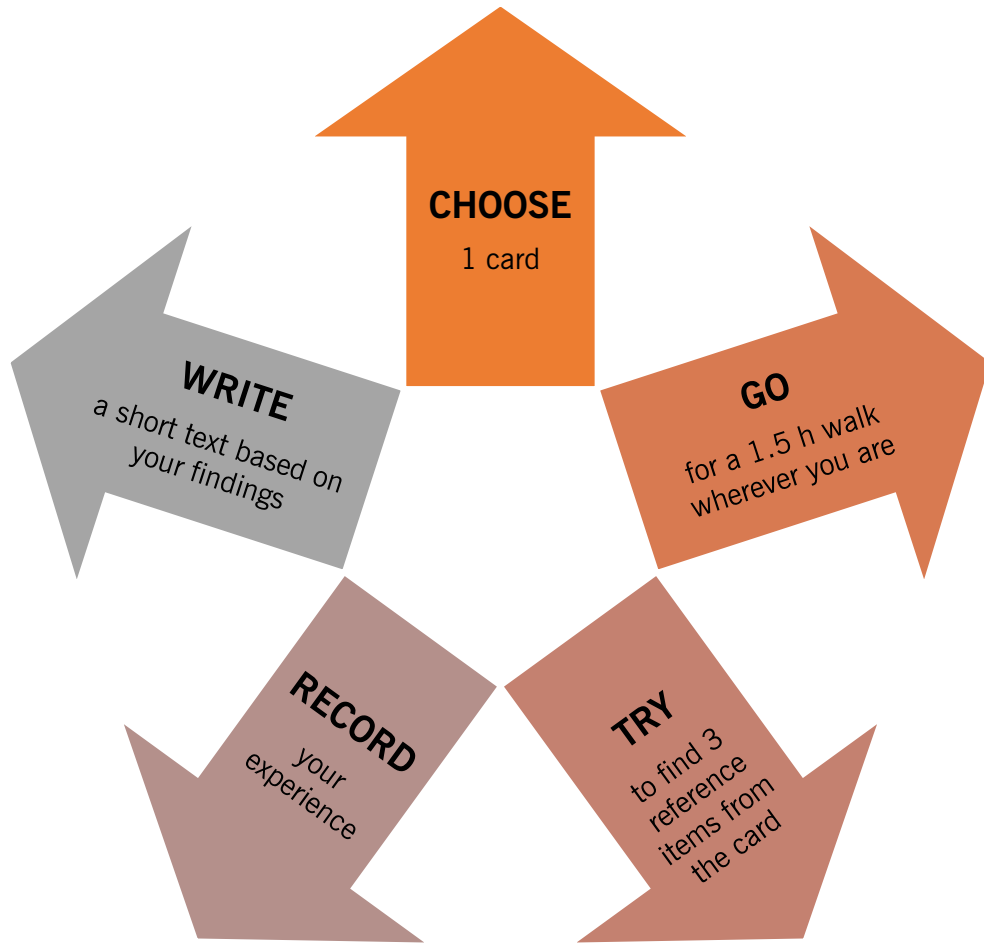
---

a (graffiti) writer's professional instrument for new  
content generation

---

an art object

---



## Rules

In this game you compete with yourself, to reach a better version of you.

You get 1 card (randomly) and explore the city, based on what you get. You can choose a type of walk that is appropriate for your aims and record your experience along the way.

I would suggest taking a silent walk as a way to delve deeper into the city experience and restrict the senses.

#PORTOSCRIPT

ENCONTRA O NORTE

FIND YOUR WAY

a tool for urban exploration  
developed by Lucas Pimenta, gongomiro  
based on "Urbex" for social media found in Porto

WRITE  
a short text about the  
your findings

CHOOSE  
a word

GO  
for a 1.5 to 2 miles  
walking journey

TRY  
to find a  
new place  
to explore

RECORD  
your journey

A

ABRIL / APRIL  
AMOR / LOVE  
AQUI / HERE  
ARRENDAMENTO / RENT  
AUMENTO / INCREASE

EU AINDA ESTOU  
AQUI

I AM STILL HERE

B

BARRIO / BLOCK  
BARRIO / NEIGHBORHOOD  
BARBA / BEARD  
BRANQUITUDE / WHITENESS  
BASTANTE / ENOUGH; A LOT

BASTANTE PARA  
ESCOLHER ESTAR  
PRESSO A TI

ENOUGH TO  
CHOOSE TO BE  
ATTACHED TO YOU

C

CANIBALISMO / CANIBALISM  
CAPITALISMO / CAPITALISM  
CARRO / CAR  
CASA / HOUSE  
CIDADE / CITY

LUTE PELA SUA  
CIDADE

FIGHT FOR YOUR  
CITY

D

DEDO / FINGER  
DEFESA / DEFENSE  
DINHEIRO / MONEY  
DIRETO / RIGHT  
DROGA / DRUG

CAMINHO A  
NOITE PARA  
CASA, COM AS  
CHAVES ENTRE  
OS DEBOS

I WALK HOME AT  
NIGHT WITH THE  
KEYS BETWEEN  
MY FINGERS

E

ENERGIA / ENERGY  
ENQUANTO / WHILE  
EQUILIBRAR / BALANCE  
ETERNAMENTE / FOREVER  
EU / I

PENSA  
ENQUANTO  
PUDES

THINK WHILE  
YOU CAN

F

FAMILIA / FAMILY  
FERIAS / HOLIDAYS  
FLOR / FLOWER  
FERRARI / FERRARI  
FUTEBOL / FOOTBALL

HOJE ESTOU  
MENTALMENTE DE  
FERIAS

TODAY MENTALLY  
I AM ON  
HOLIDAYS

G

GAIOLA / CAGE  
GARANTIR / GUARANTEE  
GRAFFITI / GRAFFITI  
GREVA / STRIKE  
GUARDA-CHUVA / UMBRELLA

OS SINAIS NO PASSEIO  
IMPEDEM OS  
GUARDA-CHUVAS

SIGNS ON THE  
SIDEWALK BLOCK THE  
UMBRELLAS

H

HABITACAO / HOUSING  
HABITAR / LIVE  
HOJE / TODAY  
HONESTIDADE / HONESTY  
HONOR / HONOUR

HOJE ESTOU PIOR  
QUE ESTRAGADA

TODAY I AM  
FURIOUS

I

IGREJA / CHURCH  
IMOBILIARIO / REAL ESTATE  
INDEPENDENCIA / INDEPENDENCE  
INDIFERENTE / INDIFFERENT  
INTERIOR / INTERNAL

OS INDIFERENTES  
TAMBEM SAO  
CULPADOS

THE  
INDIFFERENT  
ARE ALSO GUILTY

J

JAGUAR / JAGUAR  
JESUS / JESUS  
JOVENS / YOUTH  
JUNTAR-SE / JOIN  
JURAR / SWEAR

JOVENS SEM  
PERSPECTIVAS DE  
VIDA

YOUTH WITH NO  
PROSPECTS IN  
LIFE

K

KARMA / KARMA

ELES NOS DEVEM  
A ALMA, FODA-SE  
O KARMA

SCREW KARMA,  
THEY OWE US A  
SOUL

L

LEGAL / LEGAL  
LIVRES / FREE  
LOUCURA / MADNESS  
LUTA / FIGHT  
LUZ / LIGHT

HA UMA FENDA EM  
TUDO, E ASSIM  
QUE A LUZ ENTRA

THERE IS A CRACK  
IN EVERYTHING,  
THAT'S HOW THE  
LIGHT GETS IN

M

MEDO / FEAR  
MEMORIA / MEMORY  
MURTEL / BEAR  
MULHER / WOMAN  
MUNDO / WORLD

ENCONTRAR O  
NORTE, VIVER  
ACIMA DA MORTE

GETTING BACK  
ON TRACK,  
LIVING ABOVE  
DEATH

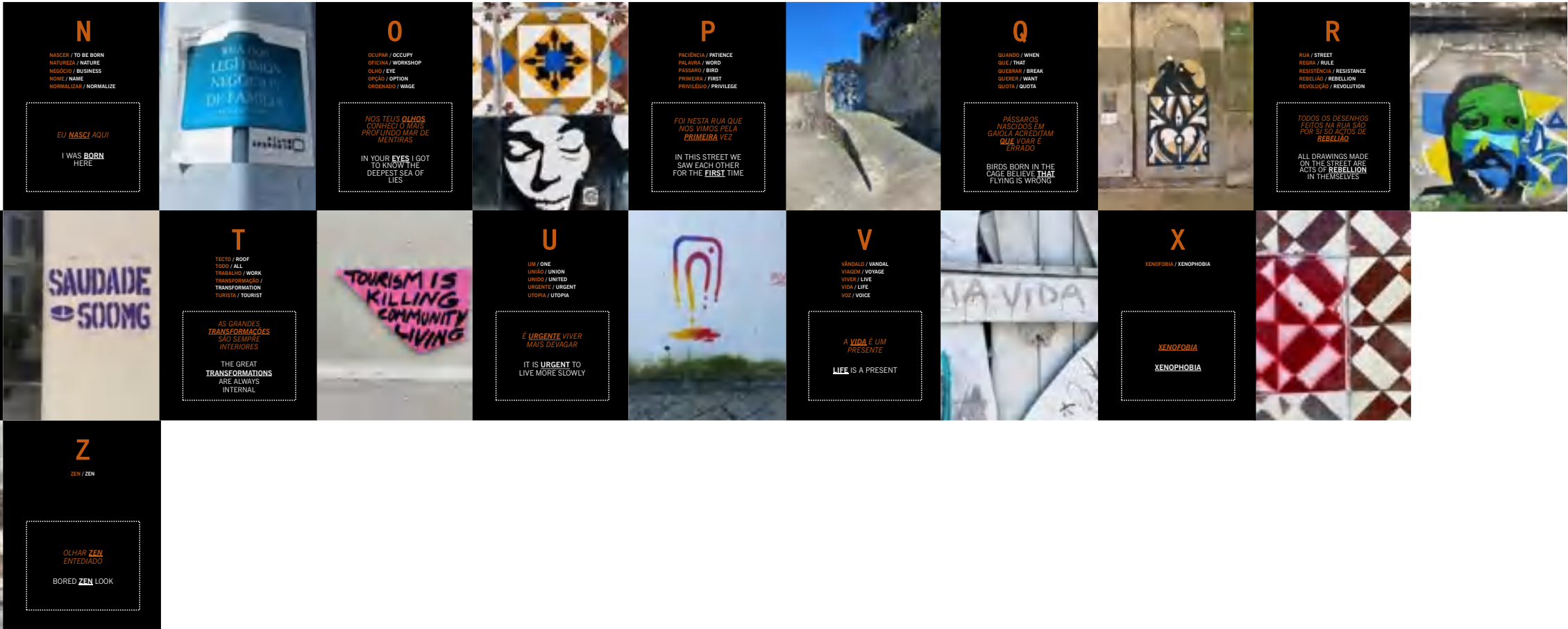
N

NASCO / TO BE BORN  
NATUREZA / NATURE  
NEGOCIO / BUSINESS  
NOME / NAME  
NORMALIZAR / NORMALIZE

EU NASCI AQUI

I WAS BORN  
HERE



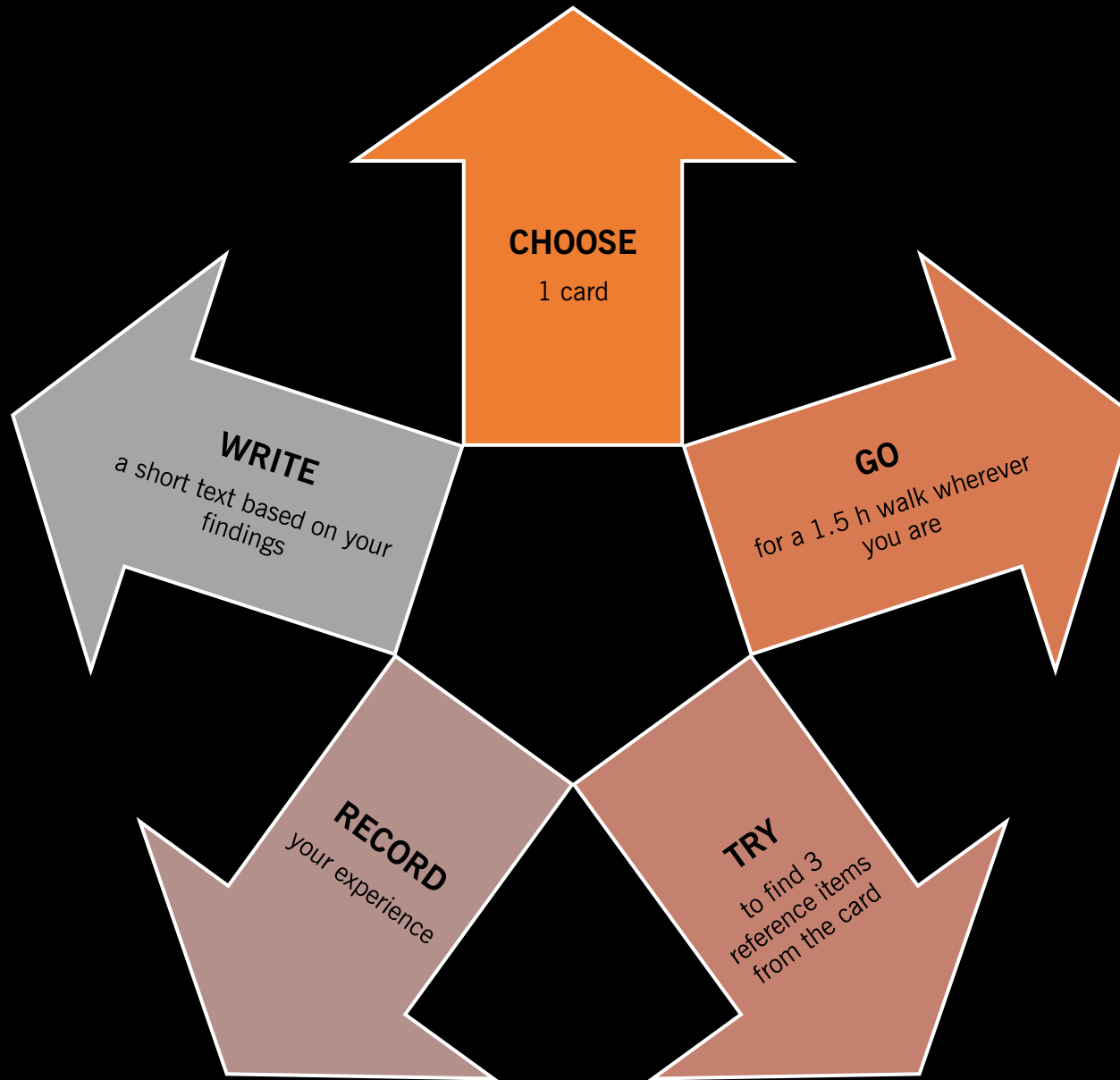




**FIND  
YOUR  
WAY**

**ENCONTRA  
O NORTE**

a tool for urban exploration developed by **Laura Prikule**  
based on **Street Art and Graffiti** found in Porto





# A

ABRIL / APRIL

AMOR / LOVE

AQUI / HERE

ARRENDAMENTO / RENT

AUMENTO / INCREASE



*EU AINDA ESTOU  
AQUI*

I AM STILL HERE

B

**BARRACO** / SHACK

**BAIRRO** / NEIGHBORHOOD

**BARBA** / BEARD

**BRANQUITUDE** / WHITENESS

**BASTANTE** / ENOUGH; A LOT



***BASTANTE PARA  
ESCOLHER ESTAR  
PRESSO A TI***

**ENOUGH TO  
CHOOSE TO BE  
ATTACHED TO YOU**



CANIBALISMO / CANIBALISM

CAPITALISMO / CAPITALISM

CARRO / CAR

CASA / HOUSE

CIDADE / CITY

C

*LUTE PELA SUA*  
**CIDADE**

FIGHT FOR YOUR  
**CITY**





**DEDO** / FINGER

**DEFESA** / DEFENSE

**DINHEIRO** / MONEY

**DIREITO** / RIGHT

**DROGA** / DRUG

D

*CAMINHO A NOITE  
PARA CASA, COM  
AS CHAVES ENTRE  
OS DEDOS*

I WALK HOME AT  
NIGHT WITH THE  
KEYS BETWEEN  
MY FINGERS

# E

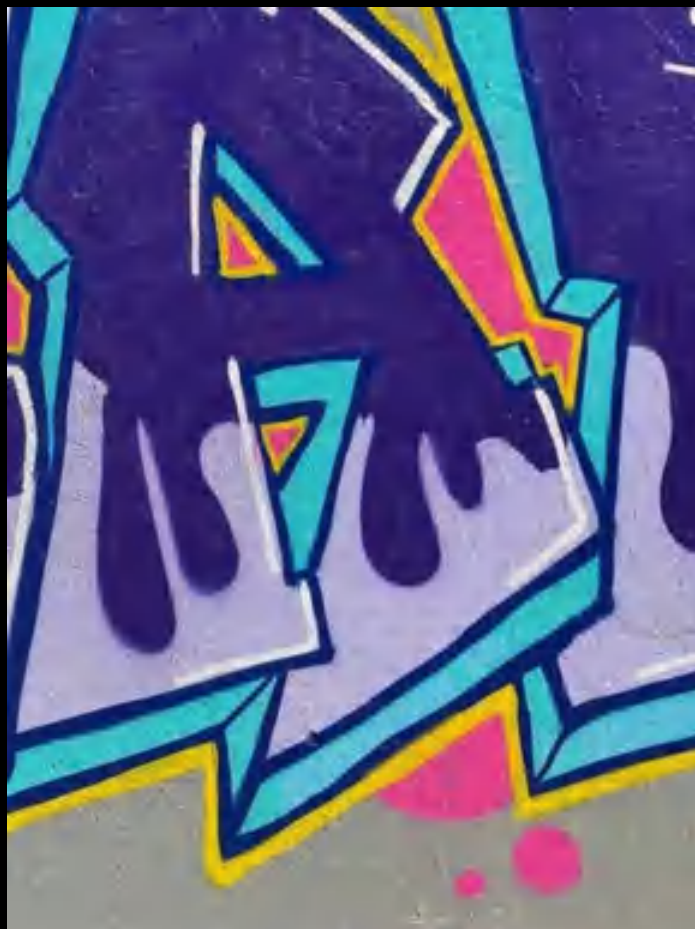
ENERGIA / ENERGY

ENQUANTO / WHILE

EQUILIBRAR / BALANCE

ETERNAMENTE / FOREVER

EU / I



*PENSA ENQUANTO  
PUEDES*

THINK WHILE  
YOU CAN



FAMILIA / FAMILY

FIM / END

FLOR / FLOWER

FERRARI / FERRARI

FUTEBOL / FOOTBALL

F

*HOJE ESTOU  
MENTALMENTE DE  
FERIAS*

TODAY MENTALLY  
I AM ON  
VACATION





GAIOLA / CAGE

GARANTIR / GUARANTEE

GRAFFITI / GRAFFITI

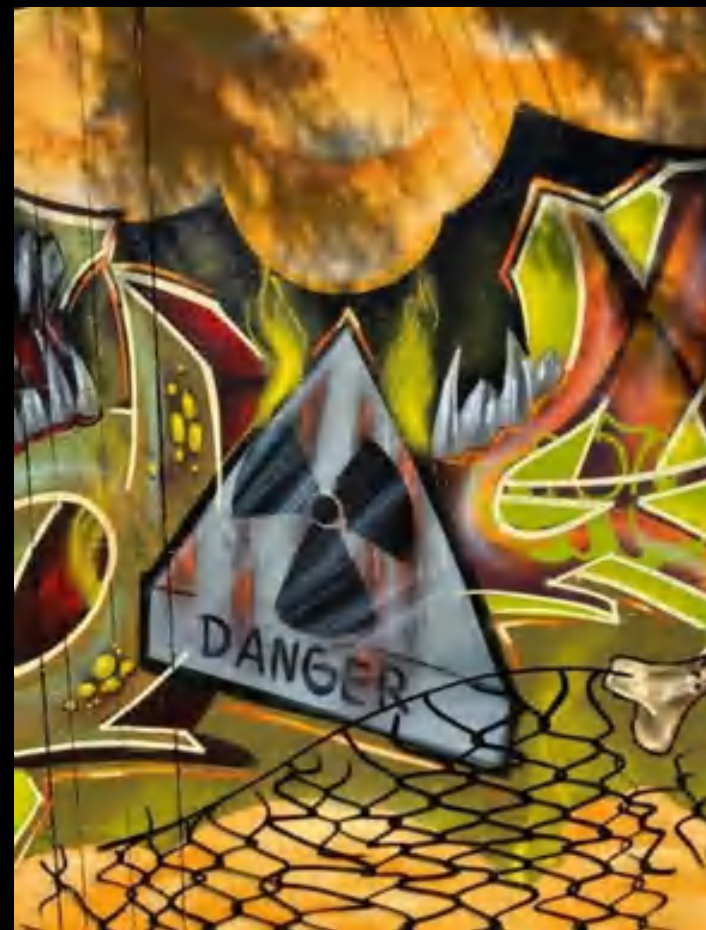
GREVE / STRIKE

GUARDA-CHUVA / UMBRELLA

G

*OS SINAIS NO  
PASSEIO IMPEDEM OS  
GUARDA-CHUVAS*

SIGNS ON THE  
SIDEWALK BLOCK  
THE UMBRELLAS



**HABITAÇÃO** / HOUSING

**HABITAR** / LIVE

**HOJE** / TODAY

**HONESTIDADE** / HONESTY

**HONOR** / HONOUR

H

***HOJE** ESTOU PIOR  
QUE ESTRAGADA*

TODAY I AM  
**FURIOUS**



IGREJA / CHURCH

IMOBILIÁRIO / REAL ESTATE

INDEPENDÊNCIA / INDEPENDENCE

INDIFERENTE / INDIFFERENT

INTERIOR / INTERNAL

OS INDIFERENTES  
TAMBÉM SÃO  
CULPADOS

THE  
INDIFFERENT  
ARE ALSO GUILTY



J

**JAGUAR** / JAGUAR

**JESUS** / JESUS

**JOVENS** / YOUTH

**JUNTAR-SE** / JOIN

**JURAR** / SWEAR



**JOVENS** SEM  
PERSPECTIVAS DE  
VIDA

**YOUTH** WITH NO  
PROSPECTS IN  
LIFE

KARMA / KARMA

K



*ELES NOS DEVEM  
A ALMA, FODA-SE  
O KARMA*

THEY OWE US A  
SOUL, FUCK  
KARMA



LEGAL / LEGAL

LIVRES / FREE

LOUCURA / MADNESS

LUTA / FIGHT

LUZ / LIGHT



*HÁ UMA FENDA  
EM TUDO, É ASSIM  
QUE A LUZ ENTRA*

THERE IS A CRACK  
IN EVERYTHING,  
THAT'S HOW THE  
LIGHT GETS IN



M

MEDO / FEAR

MEMÓRIA / MEMORY

MORTE / DEATH

MULHER / WOMAN

MUNDO / WORLD



*ENCONTRAR O  
NORTE, VIVER  
ACIMA DA MORTE*

FINDING YOUR  
WAY IS TO LIVE  
ABOVE DEATH



**NASCER** / TO BE BORN

**NATUREZA** / NATURE

**NEGÓCIO** / BUSINESS

**NOME** / NAME

**NORMALIZAR** / NORMALIZE

N

*EU NASCI AQUI*

I WAS BORN  
HERE

0

OCUPAR / OCCUPY

OFICINA / WORKSHOP

OLHO / EYE

OPÇÃO / OPTION

ORDENADO / WAGE



NOS TEUS **OLHOS**  
CONHECI O MAIS  
PROFUNDO MAR  
DE MENTIRAS

IN YOUR **EYES** I  
GOT TO KNOW  
THE DEEPEST SEA  
OF LIES





**PACIÊNCIA** / PATIENCE

**PALAVRA** / WORD

**PÁSSARO** / BIRD

**PRIMEIRA** / FIRST

**PRIVILÉGIO** / PRIVILEGE

P

*FOI NESTA RUA  
QUE NOS VIMOS  
PELA **PRIMEIRA**  
VEZ*

IN THIS STREET  
WE SAW EACH  
OTHER FOR THE  
**FIRST** TIME



**PACIÊNCIA** / PATIENCE

**PALAVRA** / WORD

**PÁSSARO** / BIRD

**PRIMEIRA** / FIRST

**PRIVILÉGIO** / PRIVILEGE

P

*FOI NESTA RUA  
QUE NOS VIMOS  
PELA **PRIMEIRA**  
VEZ*

IN THIS STREET  
WE SAW EACH  
OTHER FOR THE  
**FIRST** TIME

Q

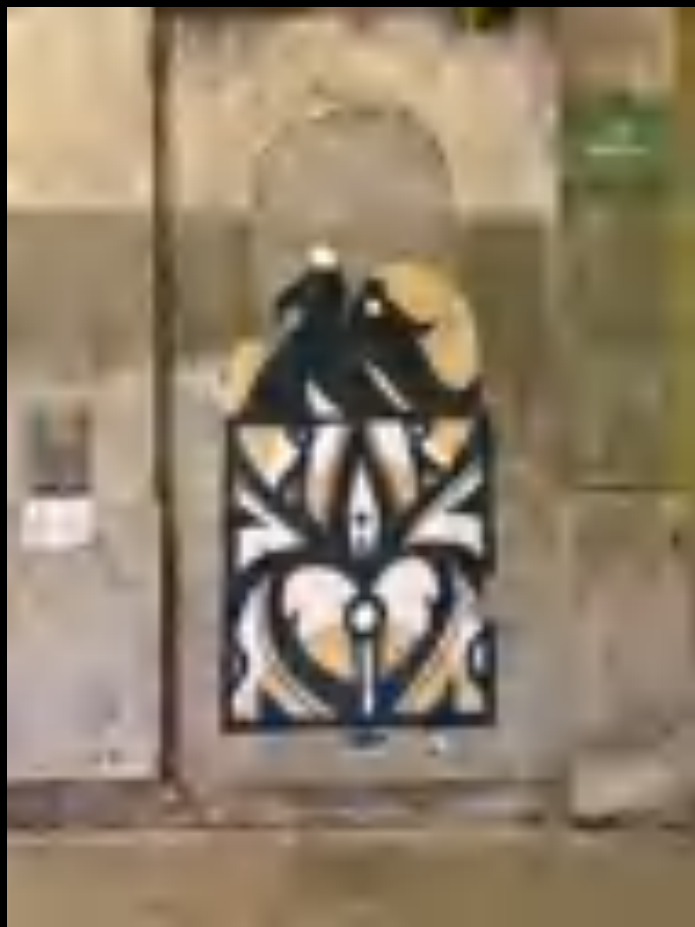
QUANDO / WHEN

QUE / THAT

QUEBRAR / BREAK

QUERER / WANT

QUOTA / QUOTA



*PÁSSAROS  
NASCIDOS EM  
GAIOLA ACREDITAM  
QUE VOAR É  
ERRADO*

BIRDS BORN IN THE  
CAGE BELIEVE THAT  
FLYING IS WRONG





**RUA** / STREET

**REGRA** / RULE

**RESISTÊNCIA** / RESISTANCE

**REBELIÃO** / REBELLION

**REVOLUÇÃO** / REVOLUTION

R

*TODOS OS DESENHOS  
FEITOS NA RUA SÃO  
POR SI SO ACTOS DE  
**REBELIÃO***

ALL DRAWINGS MADE  
ON THE STREET ARE  
ACTS OF **REBELLION**  
IN THEMSELVES



**RUA** / STREET

**REGRA** / RULE

**RESISTÊNCIA** / RESISTANCE

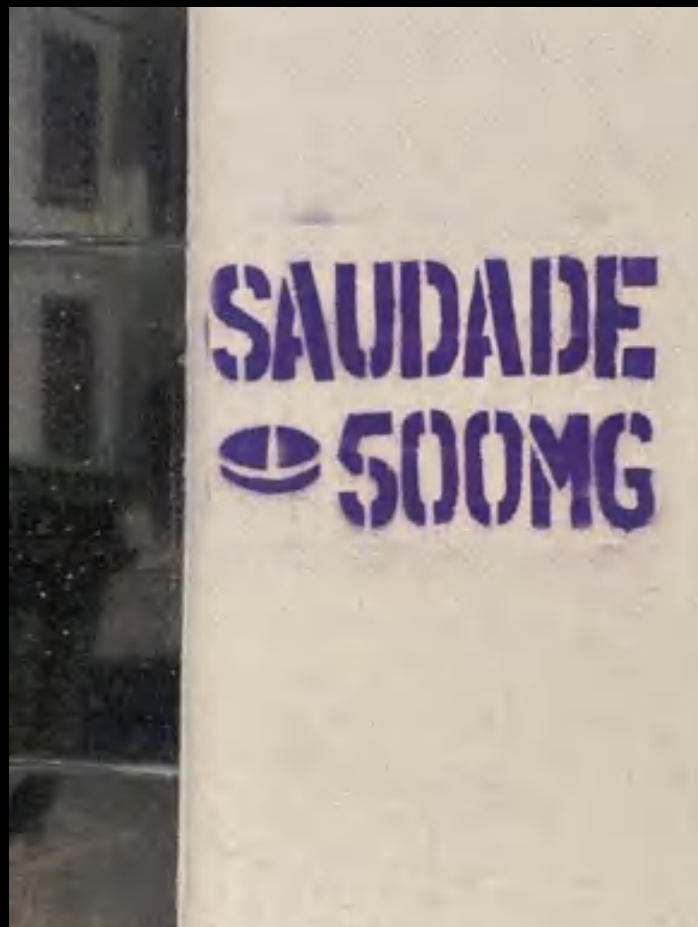
**REBELIÃO** / REBELLION

**REVOLUÇÃO** / REVOLUTION

R

*TODOS OS DESENHOS  
FEITOS NA RUA SÃO  
POR SI SO ACTOS DE  
**REBELIÃO***

ALL DRAWINGS MADE  
ON THE STREET ARE  
ACTS OF **REBELLION**  
IN THEMSELVES



SABER / TO KNOW

SAUDADE / LONGING

SENTIDO / FEELING

SOCIAIS / SOCIAL

SOL / SUN

S

*EM CASO DE  
CHUVA, O SOL  
ESTÁ AQUI*

IN CASE OF RAIN  
THE SUN IS HERE





TECTO / ROOF

TODO / ALL

TRABALHO / WORK

TRANSFORMAÇÃO /

TRANSFORMATION

TURISTA / TOURIST

T

AS GRANDES  
TRANSFORMAÇÕES SÃO  
SEMPRE INTERIORES

THE GREAT  
TRANSFORMATIONS  
ARE ALWAYS INTERNAL



UM / ONE

UNIÃO / UNION

UNIDO / UNITED

URGENTE / URGENT

UTOPIA / UTOPIA

U

*É URGENTE  
VIVER MAIS  
DEVAGAR*

IT IS URGENT TO  
LIVE MORE  
SLOWLY



**VÂNDALO** / VANDAL

**VIAGEM** / VOYAGE

**VIVER** / LIVE

**VIDA** / LIFE

**VOZ** / VOICE

V

*A VIDA É UM  
PRESENTE*

**LIFE** IS A  
PRESENT



**XENOFOBIA / XENOPHOBIA**



**XENOFOBIA**

**XENOPHOBIA**

ZEN / ZEN

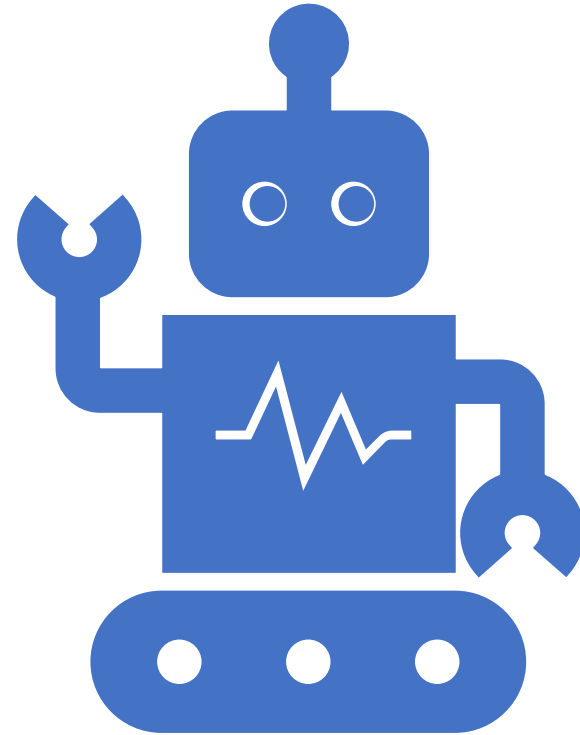
Z



*OLHAR ZEN  
ENTEDIADO*

BORED ZEN LOOK

# AI-BLOCK OF RESEARCH





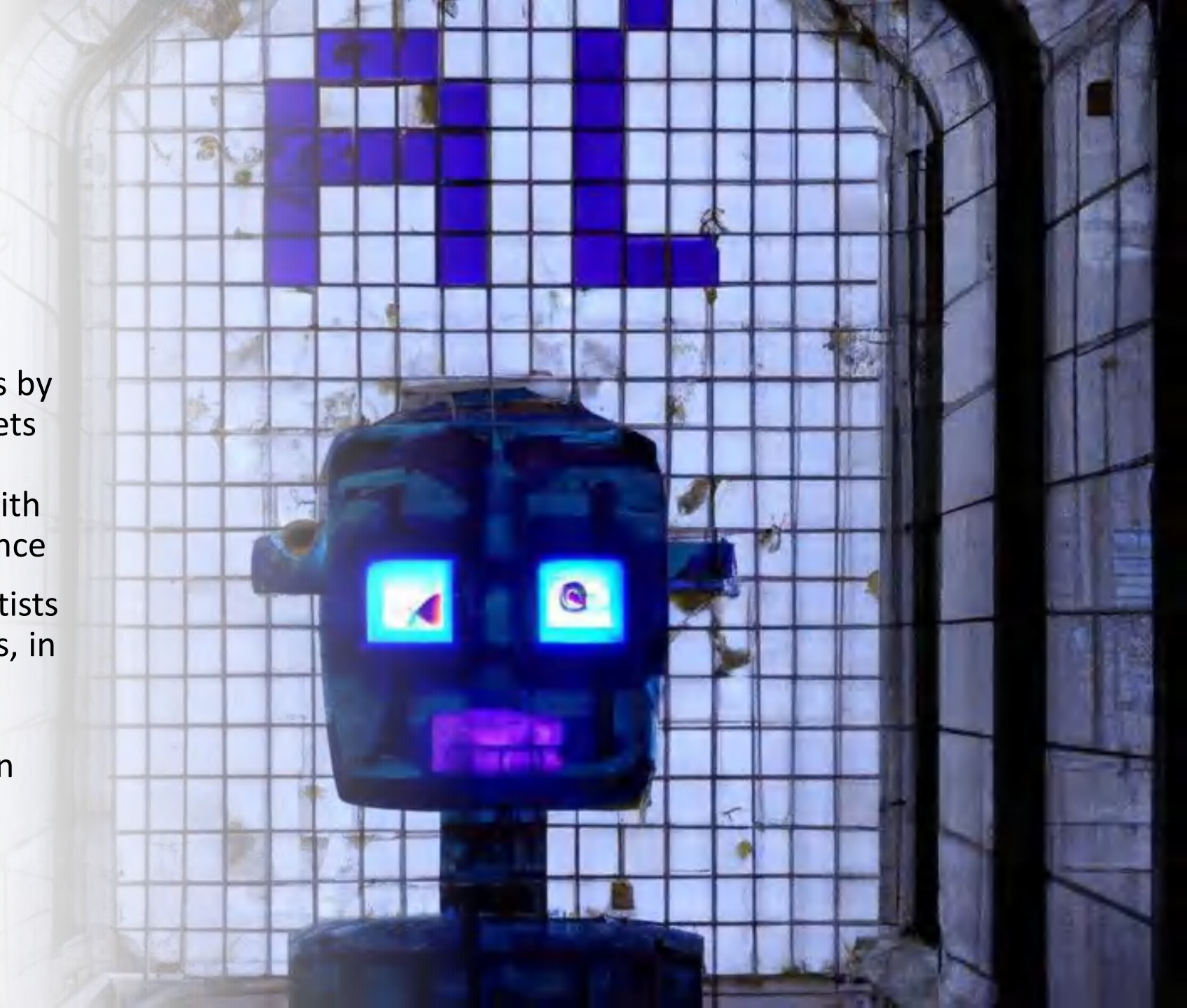


# AI GENERATED ART

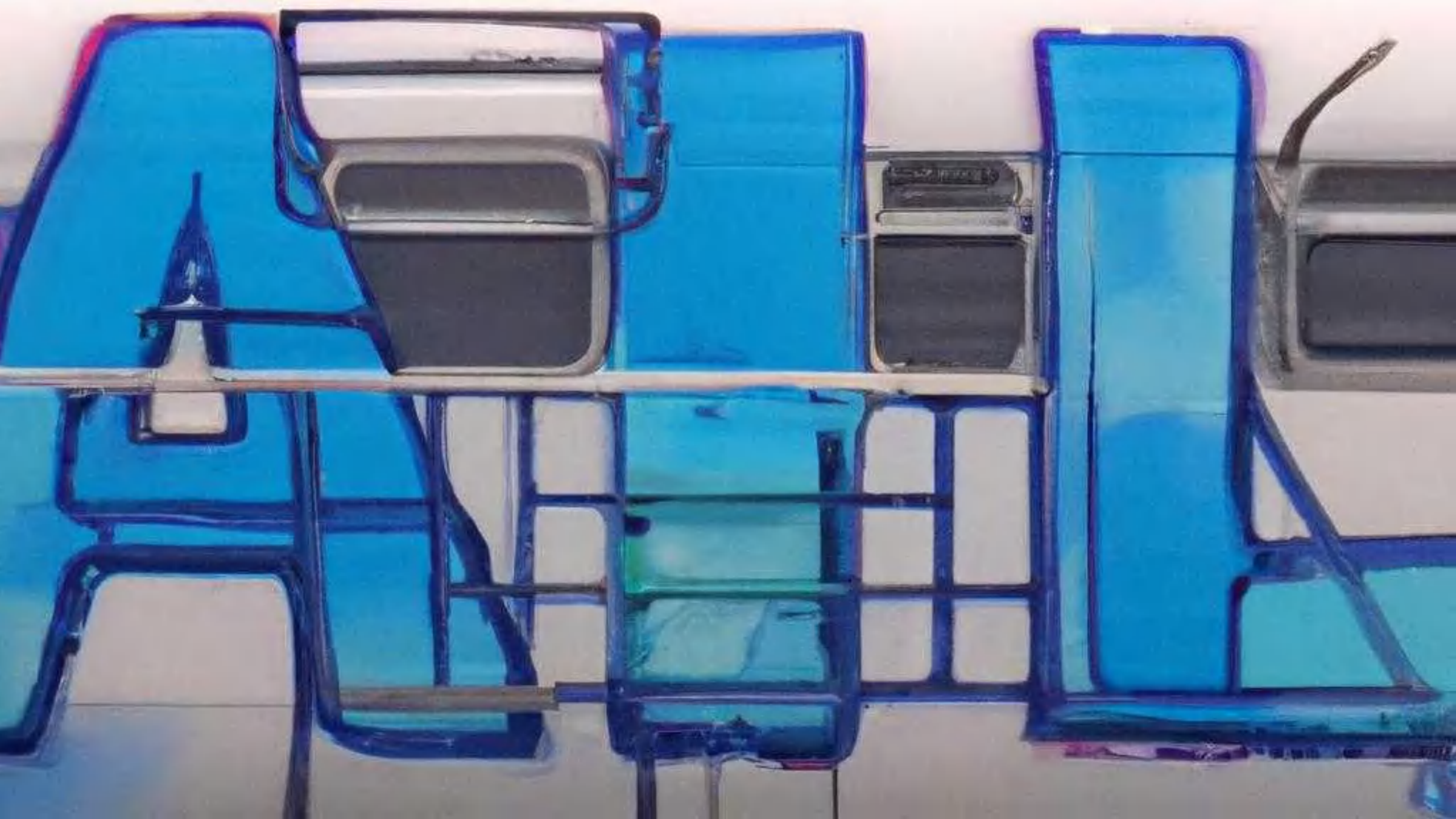
- The following images were obtained using the AI-based image generators Deep Dream and DALL E 2 with prompts.
- For my first piece I entered a simple prompt with the words *“Graffiti, Resistance, Blue, Woman”* and later processed the image until it felt satisfactory. My objective was also to test the generator’s response to graffiti and visually compare the outcome with the images I have directly taken in the streets.

# AI GENERATED ART

- Later, I combined my findings by doing field research in the streets of Porto, theoretical readings about Graffiti and Street Art, with the notion of Artificial Intelligence
- imagining AI as one of the artists working out there in the streets, in abandoned buildings, painting graffiti on trains etc., and the possible works it could create in the role of a street artist











As an AI language model, I can suggest some ways in which AI can help create powerful words and sentences for graffiti and street art:

1. Natural Language Processing: AI-powered natural language processing can analyze the meanings and connotations of different words and phrases in various languages. This can help graffiti artists create powerful and provocative messages that resonate with their intended audience.
2. Image Recognition: AI-powered image recognition can help graffiti artists create art that is more visually appealing and unique. By analyzing existing graffiti, street art, and other works of art, AI can suggest new techniques and styles to artists and help them create more original pieces.
3. Text-to-Speech: AI-powered text-to-speech technology allows graffiti artists to create audio messages that accompany their artwork. This can help engage people who are visually impaired or those who may not understand the written message.
4. Social Media Interaction: AI can help graffiti artists to interact with their audience on social media platforms. By analyzing the feedback from their followers, AI-powered tools can help artists develop new ideas and create more meaningful messages.

## DIALOGUES WITH AI

- I started talking to ChatGPT about research-related questions.
- Here are some samples from the conversations I was having with ChatGPT about graffiti, the use of robotic systems in creating art, etc.

# INTERVIEW WITH AI

*(In this interview I was asking AI a number of questions about itself.)*

- **User (LP): What are the benefits of using AI in Street Art and graffiti?**

**Robot:**

AI can be used to:

- generate new and unique designs for street art and graffiti, which can be a valuable tool for artists looking to push their creativity.
- quickly produce large-scale artworks, potentially increasing productivity and efficiency for artists.
- predict optimal locations for street art installations, allowing artists to maximize exposure and impact.

**user: What are the risks of using AI in Street Art and graffiti?**

- AI-generated designs may lack the human touch and emotional resonance that many people associate with street art and graffiti. This could lead to a loss of authenticity and appeal for some audiences.
- The use of AI in street art and graffiti could contribute to the further commercialization and commodification of these art forms, potentially leading to the displacement of local, community-driven art scenes in favor of corporate interests.
- There is also the risk of over-reliance on AI-generated designs, which could stifle creative thinking and experimentation



- user: What are the collaboration and co-creation possibilities with AI in making Street Art and graffiti?

AI can be used to:

- generate and optimize street art designs based on certain criteria and parameters set by the artist or collaborators.
- create interactive street art installations that respond to inputs from the environment or the audience.
- help automate the process of creating stencils or other design elements, which can speed up production times for larger projects.
- analyze public sentiment and gather feedback on street art installations, which can help artists better understand and respond to their audience.
- enhance and augment traditional street art techniques, such as by creating projection mapping installations or adding virtual elements to physical artwork.

# INTERVIEW WITH MARK AMERIKA

The actual interview with digital artist Mark Amerika, Founding Director, Intermedia Art, Writing and Performance, University of Colorado Boulder, was a face-to-face conversation and took place on May 1, 2023, in Porto.

Here are the main ideas.

---

AI can be trained to become the voice of the artist operating it, thus, according to Mark Amerika, becoming ACI – Artificial Creative Intelligence.

---

The scope and the nature of the world we can create with the help of AI, using access to a repository of immense knowledge (AI) in the process, highly depends on the way we use the language tools in the prompts entered.

---

Creating AI-assisted lists and using algorithms may add structure to the art-making process and help to enter the state of psychic automatism, also known as the “Zone”.

# SCIENTIFIC ARTICLE

## **POSSIBILITIES TO USE AI, ACI, AND ROBOTIC TECHNOLOGIES IN FURTHER DEVELOPMENT OF GRAFFITI, STREET ART, AND PUBLIC ART**

---

In the article I use qualitative research methodology and an ethnographic approach to research how the art we meet in the urban space, like Graffiti and Street Art, could benefit from the use of ChatGPT and other types of Artificial Intelligence in different stages of content creation and also vice versa, or on the contrary, doing so would put at risk the inherent resistance nature of these art forms and diminish the general level of creativity in the urban space in the future.

---

The study delves into the reciprocal ties between these seemingly distinct fields, one marked by the imprint of the highly controlled and sometimes “conformist” Artificial Intelligence (AI) and the other being raw outbursts of energy witnessed in the streets, a clear manifesto of freedom and right to expression of radical views, voiced by Street artists and Graffiti artists.



# POSTER BASED ON THE SCIENTIFIC ARTICLE



# POSSIBILITIES TO USE AI, ACI, AND ROBOTIC TECHNOLOGIES IN FURTHER DEVELOPMENT OF GRAFFITI, STREET ART, AND PUBLIC ART

## ABSTRACT

The aim of the article was to find out, whether Street Art and Graffiti could visually and conceptually benefit, if the artists and writers used ChatGPT and other types of AI in all stages of content creation in the urban space or, on the contrary, doing so would put at risk the inherent resistance nature of these art forms and diminish the general level of creativity in the urban space in the future. **Keywords:** AI, Street Art, Social Resistance, Participatory Art, ChatGPT

## METHODS

- ✓ Qualitative research methodology
- ✓ Ethnographic approach
- ✓ Face-to face-interview with **Mark Amerika**
- ✓ Visual Analysis

and

- ✓ Content creation using Chat GPT, DALL E 2 Image Generator, and Dream Generator merging graffiti and street art concepts with AI technologies (Fig. 1-3)

## OBJECTIVE: TO ANALYSE THE RISKS AND BENEFITS

### OF USING AI IN THE CREATIVE PROCESS

Fig. 1

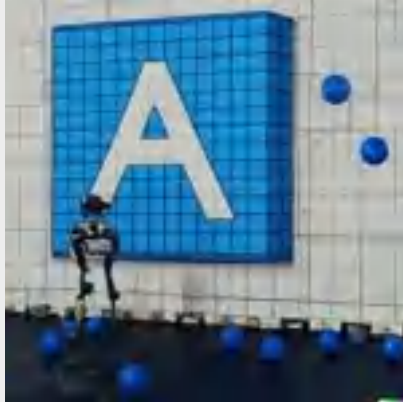
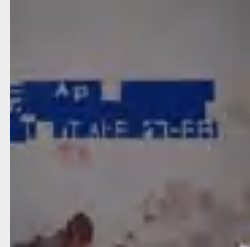


Fig. 2



## RESULTS

Fig. 3



The in-depth interview with vanguard digital artist Mark Amerika about the role of AI in the creative process provided a deeper insight into the possibilities to train AI, as well as a closer reflection on the importance of prompt engineering. If people use AI image generators for creative purposes in a basic way and do not train the technologies, the results they obtain might be a rip-off of other people's work instead of something new (Amerika, 2023).

## REFERENCES

- Amerika, Mark et al. (2021). "The Robot Does Not Exist: Remixing Psychic Automatism and Artificial Creative Intelligence." *Media-N*, vol. 17, issue 1.
- Bonadio et al. (2022). Street and Graffiti Art between Augmented Reality and Artificial Intelligence: A Copyright Perspective. *University of St. Thomas Law Journal*, 18(3).
- Mendelowitz, E. (2020). Intelligent Environments and Public Art. *Artnodes*, (26), 1-9.

## DISCUSSION

Although AI is applied in different fields and the literature shows various possibilities to use it, the "Why?" question has not been asked enough. It is important to have clear goals and objectives to be able to use the technology consciously. How far the AI can be trained to become "more human" and how far the human potential may be expanded by the use of AI and machine technology? There are not enough works in literature, so far, attempting to find the answers. It is important to use the technologies creatively.

## CONCLUSION

The question for future is: "Where should creativity go?"

AI needs to be rigorously and carefully trained to avoid a global disaster and loss of creativity.

**NEXT**



## FURTHER PLANS

### NEXT VISUAL ESSAY: FROM BOLHAO TO MATOSINHOS SUL

- I have developed a conceptual day route for graffiti research involving getting off at each subway station on the route from Bolhao (where the tourists gather) to Matosinhos Sul, taking photos of the Street Art in the vicinity for 15 minutes (the time interval between trains on weekends), hopping on the next train and going one stop further.
- The Essay will contain the name of each Station and an image and/or text associated with that location.
- The idea is based on the assumption that to experience Street Art it is necessary to feel the speed at which these works were created and get a sense of adventure associated with the process



# QUESTIONS TO RESOLVE

- Digital organising of the data (images, texts) and the outcomes (visual essays, glossary, street vocabulary etc)
- Promotion and publishing possibilities of PORTOSCRIPT: FIND YOUR NORTH

# ACADEMIC PLANS

- Writing a Master's Thesis involving replicating parts of the research process (collecting material for an Image Bank, 365 POST-ITS + translations, Visual Essays, Graffiti Terminology, Urban Dictionary) with Latvian graffiti in Riga and Jūrmala and then comparing the findings and results of the work done in Portugal and in Latvia.
- Developing a visual and linguistic data basis/webpage for the collected samples within the process.
- Further experiments with using AI.



## OTHER POTENTIAL ACTIVITIES

- Workshops based on Portoscript, using the cards for urban walks, writing and art-making
- Further development of the game
- Making an Artist Book, including the Post-its, Essays, Glossary, Dictionary, Cards and other writings
- An exhibition based on the material
- A performative spoken word lecture using the structure and vocabulary of the cards

# CONCLUSION

The future city is meant for people seeking diverse experiences. With all the principal workload entrusted to AI and robotic technologies we should seek ways to manifest our creativity. Graffiti and Street Art is one way to do that.

The urban space is a locus, where we can share knowledge and experience and interact with other people. #Portoscript concept offers such a possibility for anybody who is even mildly interested in taking some risk and venturing in urban adventures.

# References

---

- Amerika, Mark, Laura Hyunjee Kim, and Brad Gallagher. (2021). "The Robot Does Not Exist: Remixing Psychic Automatism and Artificial Creative Intelligence." *Media-N*, vol. 17, issue 1.
- Awad, S. H., Wagoner, B., & Glaveanu, V. (2017). *The street art of resistance* (pp. 161-180). Springer Singapore.
- Berio, D., Calinon, S., & Leymarie, F. F. (2016). Learning dynamic graffiti strokes with a compliant robot. In *2016 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)* (pp. 3981-3986). IEEE.
- Bhandari, Pritha. (2023). "What is Qualitative Research? Methods & Examples." In Scribbr.com (2023).
- Bonadio, E., & Egeland, S. H. (2022). Street and Graffiti Art between Augmented Reality and Artificial Intelligence: A Copyright Perspective. *University of St. Thomas Law Journal*, 18(3).
- Constable, L., Jürgens, A. S., & Thompson, B. (2023). Lee Constable: Founding "Science Meets Street Art" Co-Labs. *w/k-Zwischen Wissenschaft & Kunst*.
- Copeland, B. J. (2000). The Turing test. *Minds and Machines*, 10(4), 519-539.
- Cristea, A., Machado e Moura, C., Milián Bernal, D., Restrepo Restrepo, E., Havik, K., & Niculae, L. (2023). *Repository. 49 Methods and Assignments for Writing Urban Places*.



- Csikszentmihalyi, M., Abuhamdeh, S., & Nakamura, J. (2005). Flow. *Handbook of competence and motivation*, 598-608.
- Kuznetsov, S., Paulos, E., & Gross, M. D. (2010). WallBots: interactive wall-crawling robots in the hands of public artists and political activists. In *Proceedings of the 8th ACM Conference on Designing Interactive Systems* (pp. 208-217).
- Li, Z., Wang, Y., Wang, W., Greuter, S., & Mueller, F. F. (2020). Empowering a creative city: engage citizens in creating street art through human-ai collaboration. In *Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems* (pp. 1-8).
- Mendelowitz, E. (2020). Intelligent Environments and Public Art. *Artnodes*, (26), 1-9.
- Staničić, A. (2023). Wandering aimlessly: Exploration of an unknown city. In *Repository: 49 Methods and Assignments for Writing Urban Places* (p. 202). nai010 publishers.
- Voolaid, P. (2012). In graffiti veritas: A paremic glance at graffiti in Tartu. *Estonia and Poland: Creativity and change in cultural communication, 1*, 237-268.
- West, D. M., & Allen, J. R. (2018). How artificial intelligence is transforming the world. *Report. April, 24, 2018*.
- Wittgenstein, L. (1921). Tractatus. In [the Project Gutenberg eBook #5740: Tractatus Logico-Philosophicus](#) pp. 76.
- Wolfe, C. (2010). *What is posthumanism?* (Vol. 8). U of Minnesota Press.