

ISSN: 2184-0180
DOI: 110.53681/c1514225187514391s30

VOLUME XVII (34)

30 de novembro, 2024

DOI: 10.53681/c1514225187514391s.32

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Founded In 2008

ISSN: 2184-0180
E-ISSN: 1646-9054
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DOI: 10.53681/c1514225187514391s.28

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Indexation

Scopus (Abstract and citation database - Elsevier – Articles from 2022 to date)

Scopus®

Evaluation Systems and Dissemination

SciELO

Avaliação Qualis Capes (B1)

Agenzia Nazionale Di Valutazione del Sistema Universitario e della Ricerca

MIAR (ICDS = 4.1)

Latindex (Quality Criteria: 38 in 38)

International Databases and Search Engines

REDIB – Ibero-American Network for Innovation and Scientific Knowledge

DOAJ (Directory of Open Access Journals)

Google Scholar

BASE (Bielefeld Academic Search Engine)

OAIster® database (Mundial)

CiteFactor

International Standard Serial Number - International Centre // The Global Index for Continuing Resources

Library Catalogues

Jisc Library Hub Discover (UK)

International Organizations Collaboration

Convergências has an alliance with Design Behaviors journal

Portuguese Scientific Repositories

Repositório IPCB

ABOUT US

Sobre nós

A Convergências - Revista de Investigação e Ensino das Artes é uma publicação de Acesso Livre, com E-ISSN e avaliação paritária cega, que publica artigos nas áreas do design, da música e artes visuais.

A Revista Convergências publica gratuitamente em acesso aberto os resultados originais avaliados por pares, que expõem experiências e resultados oriundos da investigação e da prática nas áreas do design, da música e das artes visuais. Através de Artigos Originais, Caso de Estudo ou Artigo de revisão da literatura, escritos por profissionais, investigadores e académicos, promove o conhecimento relativo às atividades do design, da música e de outras artes visuais, em todos os seus domínios de aplicação, bem como da sua história, do seu ensino e aprendizagem.

Os autores e leitores deste jornal são sobretudo profissionais, estudantes, investigadores e estudiosos de todos os campos do design, da música e artes visuais a nível internacional.

É publicada nos meses de Maio e Novembro de cada ano e aceita artigos escritos em português, inglês e espanhol.

A chamada de trabalhos decorre em permanência até ao último dia do mês de março e de setembro de cada ano.

Objeto e âmbito

Atuar como um interface internacional onde seja possível a discussão entre investigadores académicos e profissionais da indústria, relatando novas pesquisas, teorias, princípios, procedimentos ou técnicas relevantes para o design, artes visuais e musicologia / música.

Nosso objetivo é disseminar novas perspectivas teóricas, novas práticas, processos, métodos e técnicas que resultam de pesquisa fundamentada em projetos, teoria e experiência de ensino ou de outras relações entre dados existentes, com resultados aplicáveis nas áreas de design, artes visuais e musicologia / música.

Propósito

Assumimos o compromisso de valorizar a investigação nas áreas do design, da música e das artes visuais, tanto no particular quanto nas suas interseções e convergências, na sua prática e no seu ensino.

A investigação através e baseada na prática tem um carácter exploratório capaz de catalisar resultados inovadores, considerando formas de pensar, a experiência prática e abordagens centradas nas pessoas.

Por outro lado, as práticas de ensino fomentam a sistematização do conhecimento, promovendo melhores práticas pedagógicas, ambientes, interfaces e ferramentas de aprendizagem mais intuitivos e envolventes, que possibilitam uma melhor compreensão, retenção e fruição.

Questões de design, música e arte do foro disciplinar ou interdisciplinar, nos seus diferentes domínios de aplicação ou prática, que proporcionem a análise, o desenvolvimento e a discussão de aspectos fundamentais. Incluindo a história e a teoria, que permitam compreender melhor os assuntos, métodos, práticas e conceitos de cada disciplina.

Resultados aplicados, a partir de abordagens educativas, culturais, sociais, estéticas e simbólicas, considerando nomeadamente os desafios actuais e abordagens transdisciplinares.

A investigação baseada no conhecimento existente permite reunir, ordenar e correlacionar resultados e dados dispersos, potenciando-os de forma interdisciplinar e multidisciplinar.

As convergências do design, da música e das artes visuais são relevantes para o estudo de métodos, princípios, práticas e experiências. Além disso, permite uma melhor compreensão

Convergences – Journal of Research and Arts Education, has Open Access journal and is a scientific research journal with E-ISSN and blind peer review, which publishes papers in the areas of design, music and visual arts.

The Convergences Journal publishes free of charge, in open access, the original results evaluated by peers, which explain experiences and results from research and practice in the areas of design, music and the visual arts. Through Original papers, Case Reports or Review Papers, by professionals researchers and scholarly contributors, it promotes knowledge related to the activities of design, music and other visual arts in all its domains of application, as well as its history, its teaching and learning. The authors and readers of this journal are mainly professionals, students, researchers and scholars from all fields of design, music and visual arts at an international level.

Convergences is published in May and November of each year and accepts papers written in Portuguese, English or Spanish. Call for papers is permanently open until the end of March and September of each year.

Aim and scope

Act as an international forum for discussion between academic researchers and industry practitioners, reporting new research, principles, procedures or techniques relevant to design, visual arts and musicology/music.

We aim to disseminate new theoretical perspectives, new practices, processes, methods and techniques that result from project-grounded research, theory and teaching experience or from other relations between existing data, with applicable results in the areas of design, visual arts and musicology/music.

Purpose

We are committed to the importance of research in the areas of design, music, and visual arts, individually and in their intersections and convergences.

Research through and from practice has an exploratory character which can catalyze innovative results from ways of thinking, practice experience and user-centred approaches.

On the other hand, teaching practices foster the systematization of knowledge, promoting better pedagogy and engaging learning environments, interfaces, and tools, to improved comprehension, retention, and fruition.

Research based on existing knowledge makes it possible to gather, sort and correlate scattered results and data, enhancing them in an interdisciplinary and multidisciplinary way.

Design, music and art issues of disciplinary or interdisciplinary nature, among their different fields of application, providing analysis, development and discussion of fundamental aspects. Including history and theory, enabling a better understanding of the issues, methods, practices and concepts of each discipline. Applied results, from educational, cultural, social, aesthetic and symbolic approaches, considering namely current challenges and transdisciplinary approaches.

The convergences of design, music and visual arts are relevant to the study of methods, principles, practices and experiences. In addition, it allows for a better understanding of technological advances and their intersections with other areas of knowledge and artistic approaches, expanding creative possibilities and pointing to new research perspectives, skills and methodologies. In this way, progress is made towards a deeper understanding

dos avanços tecnológicos e das suas intersecções com outras áreas do conhecimento e abordagens artísticas, ampliando possibilidades criativas e apontando para novas perspectivas de investigação, competências e metodologias. Deste modo, progride-se no sentido de uma compreensão mais profunda das dimensões cognitivas, sociais e culturais do ensino, da prática e da compreensão do design, da música e das artes visuais.

Processo de Avaliação por Pares

A Revista Convergências adotou o sistema de revisão por pares duplo-cego. O editor faz uma primeira análise aos manuscritos submetidos, assegurando a adequação ao âmbito da Convergências e à política editorial, anonimato, formato de apresentação do artigo quanto às diretrizes e template para artigos, e o potencial de publicação. Sendo aprovado nesta etapa, o manuscrito é enviado para avaliação por dois ou mais avaliadores.

Os artigos são submetidos até um máximo de três rondas de avaliação, não devendo ultrapassar os cinco meses. O processo de avaliação é duplo-cego, protegendo-se a identidade dos autores e avaliadores, assegurando isenção no sistema de revisão por pares.

A avaliação é feita por doutorados (nacionais e internacionais) com experiência na temática dos manuscritos submetidos.

Política de Verificação de Plágio

A equipe editorial usa um software específico para a verificação de plágio antes do manuscrito ser enviado ao processo de avaliação por pares. Em casos em que o plágio é incorrido, a Revista Convergências adota os Princípios de Ética e declaração de negligência previstos na sua declaração Ética, que segue as recomendações da Elsevier, SciELO e do Best Practice Guidelines for Journal Editors do Committee on Publication Ethics - COPE.

Todos os artigos são submetidos ao serviço Turnitin para se verificar a possibilidade de plágio.

Arquivo

A Revista Convergências é preservada digitalmente pela OJS/ PKP Preservation Network (PKP PN).

Para além da exportação de metadados para várias bases de dados, desde 2020, todos os artigos da Revista Convergências são depositados na coleção SciELO Portugal e no Repositório Científico do Instituto Politécnico de Castelo Branco, também em Acesso Aberto. A Convergências está listada no Sherpa/ Romeo e no Internet Archive.

A versão impressa da Revista Convergências é feita por entrega de exemplar ao Centro Nacional ISSN Biblioteca Nacional de Portugal, bem como entrega ao catálogo da Biblioteca da Escola Superior de Artes Aplicadas do Instituto Politécnico de Castelo Branco.

Os autores podem fazer o auto-arquivo, nomeadamente por depósito em repositório institucional ou de temático (Pré-impressão, Manuscrito Aceite ou Artigo publicado), bem como em redes sociais, nomeadamente dedicadas à investigação.

Não incluímos qualquer tipo de publicidade de entidades externas ao IPCB. A nossa política de publicidade quase zero, tem como excepção a promoção de congressos de investigação no escopo da nossa revista e que sejam iniciativa do IPCB, sem conflito de interesses entre publicidade e o conteúdo publicado por nós.

of the cognitive, social and cultural dimensions of the teaching, practice and understanding of design, music and visual arts.

Peer Review Process

Convergências Journal has adopted the double-blind peer review system. The editor makes a first analysis of the submitted manuscripts, ensuring their suitability to Convergências' scope and editorial policy, anonymity, article presentation format according to the guidelines and template for articles, and potential for publication. If approved at this stage, the manuscript is sent for evaluation by two or more reviewers.

Articles are submitted to a maximum of three rounds of review, not to exceed five months. The evaluation process is double-blind, protecting the identity of authors and reviewers, ensuring impartiality in the peer review system.

The evaluation is done by PhDs (national and international) with experience in the subject matter of the submitted manuscripts.

Plagiarism Checking Policy

The editorial team uses a specific software for plagiarism checking before the manuscript is sent to the peer review process. In cases where plagiarism is incurred, Convergências Journal adopts the Principles of Ethics and negligence statement provided in its Ethics statement, which follows the recommendations of Elsevier, SciELO and the Best Practice Guidelines for Journal Editors of the Committee on Publication Ethics - COPE.

All submissions are submitted to Turnitin service for plagiarism checking.

Archiving

Convergências journal is digitally preserved by OJS/ PKP Preservation Network (PKP PN).

In addition to exporting metadata to various databases, since 2020, all Convergences Journal articles are deposited in the SciELO Portugal collection and in the Scientific Repository of the Polytechnic Institute of Castelo Branco, also in Open Access. Convergences is listed on Sherpa/Romeo and on the Internet Archive.

The printed version of the Journal is delivered to the ISSN National Centre of the National Library of Portugal, as well as to the catalogue of the Library of the School of Applied Arts of the Polytechnic Institute of Castelo Branco.

Authors can self-archive, namely by deposit in institutional or thematic repository (Preprint, Accepted Manuscript or Published Article), as well as in social networks, namely dedicated to research.

PUBLICATION ETHICS AND MALPRACTICE STATEMENT

*Princípios de Ética e declaração de negligência**

* This statement follows the recommendations of Elsevier, SciELO and of the Best Practice Guidelines for Journal Editors from Committee on Publication Ethics - COPE.

* Esta declaração segue as recomendações da Elsevier, SciELO e do Best Practice Guidelines for Journal Editors do Committee on Publication Ethics - COPE.

Declaração Geral

A Convergências - Revista de Investigação e Ensino das Artes tem um compromisso com a ética e direitos capazes de garantir a qualidade das publicações, extensíveis a todas as partes associadas a esta revista: autores, editores, reviewers e Edições IPCB. Assumimos uma política de antiplágio para garantir a originalidade dos artigos ou evitar outros comportamentos antiéticos. Esta política está associada a um conjunto de procedimentos que visam assegurar a originalidade, proteger a autoria e detetar coincidências ou semelhanças entre nas submissões para publicação. Propostas ou artigos que constituam plágio serão descartados da publicação.

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Somente trabalhos originais que não tenham sido submetidos ou publicados em outra publicação podem ser submetidos à Convergências. É uma exceção a publicação de diferentes artigos sobre diferentes componentes do mesmo estudo ou pesquisa, desde que não tenham ou venham a ser publicados em outro periódico.

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Considera-se plágio o uso de trabalhos ou ideias de outro(s) sem a sua permissão ou referência de autoria e origem, utilizando-os como seus próprios e para benefício próprio.

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Considera-se como Fraude o uso de informações enganosas a propósito de procedimentos, condições de pesquisa, sobre a invenção/conceção ou a adulteração de dados de pesquisa, incluindo dados quantitativos, imagens, tabelas, gráficos ou outros. Também a exclusão de dados que são considerados inconvenientes. Nesse sentido, o processo de revisão por pares cega implica a seleção de avaliadores que não se conhecem, nem a pesquisa em questão.

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Há um conflito de interesses quando o editor ou o avaliador tem uma relação pessoal ou profissional com o autor do manuscrito, passível de beneficiar ou prejudicar o mesmo durante o processo de avaliação. Os conflitos para o autor do manuscrito podem resultar de relações laborais, bolsas, patentes, direitos de autor, consultoria, propriedade, acordo ou relações pessoais que possam influenciar o sentido e resultados da pesquisa.

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General statement from Convergências Journal

Convergências - Revista de Investigação e Ensino das Artes is committed to the ethics and rights able to guarantee the quality of the publications, which can be extended to all parties associated with this journal: authors, editors, reviewers and IPCB Editions. We take an antiplagiarism policy to ensure the originality of the papers or avoid other unethical behavior. This policy is associated with a set of procedures aimed at ensuring originality, protecting authorship and detecting coincidences or similarities between submissions for publication. Proposals or articles that constitute plagiarism will be discarded from publication.

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Only original papers that have not been submitted or published in another publication can be submitted to Convergências. It is an exception the publication of different papers about different parts of the same study or research, with the condition that they do not have or will be published in another periodical.

Submission and publication fees

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It is considered plagiarism the use of works or ideas of another (s) without permission and reference of authorship and origin, using them as their own and for their own benefit.

Collaboration

Papers can be signed by a maximum of five authors. In either case, the articles have a main author who comes first and acts as corresponding author, to which the following follow. This order is defined by the authors at the time of submission. The letter of Consent to Publish and guarantee of originality is signed by the corresponding author (main or first author) on behalf of the other authors.

Fraud

It is considered fraudulent the use of misleading information about research procedures, conditions, the invention/design or tampering with search data such as images, tables, graphs or other. Also the exclusion of data that are judged to be inconvenient. In this sense, the blind peer review process implies the selection of evaluators who do not know each other, nor the research in question.

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There is a conflict of interest when the publisher or the reviewer has a personal or professional relationship with the author that could benefit or harm the author during the evaluation process. Conflicts for the author of the manuscript may result from labor relations, grants, patents, copyrights, advice, property, agreement or personal relationships that may influence the direction and results of the research.

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It is the duty of the Editors-in-Chief to make decisions about the editorial policies of Convergences after considering the opinion of the Contributing Editors and Associate Editors. The ultimate responsibility for deciding which articles are published is up to the Editors-in-Chief on the basis of the International Scientific Board's reviews and after ensuring compliance with the Principles of Ethics and good practice.

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Envolvimento e cooperação em investigações: compete aos Editors-in-Chief promover as medidas necessárias cabíveis quando foram apresentadas reclamações éticas relativas a um manuscrito submetido ou artigo já publicado. Os Editors-in-Chief asseguram que os autores entregam a Consent to Publish.

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Ao aceitar integrar o International Scientific Board, todos os membros assumem cumprir estes deveres.

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Pontualidade: os Reviewers devem identificar se estão qualificados e se têm condições de assegurar a tarefa, em tempo útil, para avaliar as submissões que lhe são confiadas. Os Reviewers devem realizar a leitura e avaliação e remeter o parecer aos Editors-in-Chief dentro do prazo estipulado, modo a não comprometer a notificação e retificação do artigo pelo(s) autor(es).

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Publication decision: Editors-in-Chief are responsible for deciding which articles are published, following an evaluation by the International Scientific Board of article submissions, in compliance with the current legislation on defamation, copyright infringement and plagiarism. Decisions of the Editors-in-Chief may include opinions of Contributing Editors and Associate Editors.

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Imma Forino

FOREWORD

Prefácio

The United Nations 2030 Agenda SDGs represent a global vision for a fairer, more inclusive, sustainable, and beautiful future guided by goals such as the eradication of poverty, gender equality, quality education, climate action, and building peaceful and evolved societies. The 2030 Agenda aims to tackle social challenges of considerable complexity, which are accentuated by armed conflicts, as exemplified by the current war in Ukraine. Wars not only lead to the loss of human lives and property, tangible and intangible heritage, but also jeopardise progress made on several key sustainable development priorities, such as access to education, environmental protection and the promotion of human rights. The destruction of tangible and intangible heritage is a consequence of conflicts and leads to the disappearance of artistic and cultural assets.

At the intersection of global and local demands, design can represent a transformative and interdisciplinary practice, just as music and the arts can act on the cultural, emotional and educational dimension, helping to respond to complex situations in a collaborative, creative and innovative way. Design, music and the arts can contribute to community resilience to create inclusive and innovative knowledge and solutions. Design can articulate memory and innovation, tradition and modernity in reconstruction contexts such as Ukraine and other countries in conflict situations, proposing responses that respect local history and respond to the demands of sustainability and well-being.

Not being a themed issue, the articles gathered here address how design may be able to play an active role in responding to some of these global challenges. The studies gathered here, which range from emotional and cultural issues to educational and technological practices, dialogue with the goals of the 2030 Agenda, showing how contemporary design can be the bridge between the needs of the present and the construction of a more equitable future. This preface therefore places the discussions presented in the perspective of the transformative possibilities opened by design, music and the arts.

Os Objetivos de Desenvolvimento Sustentável (ODS) da Agenda 2030 das Nações Unidas preconizam uma visão global para um futuro mais justo, inclusivo, sustentável e belo, orientado por objetivos como a erradicação da pobreza, a igualdade de gênero, a educação de qualidade, a ação climática e a construção de sociedades pacíficas e evoluídas. A Agenda 2030 pretende enfrentar desafios sociais de complexidade considerável, os quais são acentuados por conflitos armados, como exemplifica a atual guerra na Ucrânia. As guerras não só provocam a perda de vidas humanas e de bens, do património tangível e intangível, como também põe em causa progressos realizados em várias prioridades fundamentais do desenvolvimento sustentável, como o acesso à educação, a proteção do ambiente e a promoção dos direitos humanos. A destruição do património material e imaterial é uma consequência dos conflitos e leva ao desaparecimento de bens artísticos e culturais.

Na intersecção entre exigências globais e locais, o design pode representar uma prática transformadora e interdisciplinar, tal como a música e as artes podem atuar na dimensão cultural, emocional e educativa, ajudando a responder a situações complexas de modo colaborativo, criativo e inovador. O design, a música e as artes podem contribuir para a resiliência da comunidade de modo que se crie conhecimento e soluções inclusivas e inovadoras. Em particular, o design pode articular memória e inovação, tradição e modernidade nos contextos de reconstrução como vai acontecer na Ucrânia, bem como de outros países em situação de conflito, propondo respostas que respeitem a história local e respondam às exigências de sustentabilidade e bem-estar.

Não sendo um número temático, os artigos aqui reunidos, abordam a forma como o design pode ser capaz de desempenhar um papel ativo na resposta a alguns destes desafios globais. Os estudos aqui reunidos, que vão desde questões emocionais e culturais até práticas educacionais e tecnológicas, dialogam com os objetivos da Agenda 2030, mostrando como o design contemporâneo pode ser a ponte entre as necessidades do presente e a construção de um futuro mais equitativo. Este prefácio situa, portanto, as discussões apresentadas na perspetiva das possibilidades transformadoras

The universe of design in its various dimensions is turning into one of the dynamic and important fields for tackling current challenges: social, technological, environmental, or emotional. This compilation of articles reveals how design goes beyond the functional sphere and increasingly becomes a tool for cultural transformation, inclusion, and sustainability. In this direction, the research about the impact of colours in products for the elderly develops a sensitive study about the emotional impact of design. Here, the colour 'Terracotta' evokes memories and past experiences: colour choice is again confirmed to be an instrument of usability but at the same time an important factor for social inclusion. The chapter approaches, in its complexity, the formation of young designers by underlining forty emotions that are activated throughout the creative process. It also presented one of the most innovative models, which prepared the future professional for the emotional stresses he would face during the practice of the design.

Tradition and innovation-often seen as polar opposites-reify the point of relational art and design practices. Such fluidity between the traditional and the modern is presented to protect cultural heritage and reinterpretation at least in resistance to hegemonic Western narratives. It finds an echo in the discussion on historical objects from Portuguese airlines, which shows how apparently simple elements, like toys for children on flights, are a means of perpetuating brand values and memories, reflecting social and economic changes.

It also provides an analysis of immersive technologies, especially those related to traditional techniques of teaching, such as manual typography. By using 360-degree videos, it is shown that virtual reality can make the artisanal knowledge conserved and the pedagogical possibilities extended, making the learning more interactive and accessible. The integration of human creativity and artificial intelligence in fashion design reinforces this trend of merging the physical with the digital and opens new horizons for co-creation.

Among educational fields, a very promising innovation vector affecting design teaching with the use of visual technologies highlights critical thinking, creativity, and interdisciplinarity. In another instance, contributions coming from music education associations about the training of professors prove the collaboration

abertas pelo design, pela música e pelas artes. O universo do design, nas suas várias dimensões, está a transformar-se num dos campos mais dinâmicos e importantes para enfrentar os desafios atuais: sociais, tecnológicos, ambientais ou emocionais. Esta compilação de artigos revela como o design ultrapassa a esfera funcional e se torna cada vez mais uma ferramenta de transformação cultural, inclusão e sustentabilidade.

Neste sentido, a investigação sobre o impacto das cores em produtos para idosos desenvolve um estudo sensível sobre o impacto emocional do design. Aqui, a cor "Terracota" evoca memórias e experiências passadas: a escolha da cor confirma-se mais uma vez como um instrumento de usabilidade, mas ao mesmo tempo como um fator importante de inclusão social. O capítulo aborda, na sua complexidade, a formação de jovens designers, sublinhando quarenta emoções que são activadas ao longo do processo criativo. Apresentou também um dos modelos mais inovadores, que preparou o futuro profissional para as tensões emocionais que iria enfrentar durante a prática do design.

A tradição e a inovação - frequentemente vistas como opostos polares - reforçam o ponto de vista das práticas relacionais da arte e do design. Esta fluidez entre o tradicional e o moderno é apresentada para proteger o património cultural e a reinterpretação, pelo menos em resistência às narrativas ocidentais hegemónicas. Encontra eco na discussão sobre objetos históricos de companhias aéreas portuguesas, que mostra como elementos aparentemente simples, como os brinquedos para crianças nos voos, são um meio de perpetuar valores e memórias de marca, refletindo mudanças sociais e económicas.

Também fornece uma análise das tecnologias imersivas, especialmente aquelas relacionadas com as técnicas tradicionais de ensino, como a tipografia manual. Através da utilização de vídeos em 360 graus, mostra-se que a realidade virtual pode fazer com que o conhecimento artesanal seja conservado e as possibilidades pedagógicas alargadas, tornando a aprendizagem mais interativa e acessível. A integração da criatividade humana e da inteligência artificial no design de moda reforça esta tendência de fusão do físico com o digital e abre novos horizontes para a cocriação.

Entre os domínios educativos, um vetor de inovação muito promissor que afecta o ensino do design com a utilização de tecnologias visuais realça o pensamento crítico, a criatividade e a

on an institutional level as regards the boost to practices and research in that field.

However, design is not only restricted to creative and academics but also extended in the field of health and wellness, where an intervention designed with care is able to uplift the mental strength and resilience of individuals and hence must be brought into educational institutes, like the paper on vocal therapy for students of music.

Sustainability is the main topic of several articles. The young fashion designers from Portugal show how creativity can be used for social and environmental activism, using values of responsibility during the creative process. This concern is echoed in the reflections upon the requalification of unsuitable housing for emergency situations, as those pointed out by the COVID-19 pandemic. Here, the use of mobile and flexible systems is proposed for space transformation, learning from history to foreshadow future solutions.

Finally, the design role of urban critique and public art is analysed based on the works of Guga Ferraz and David Hammons with regard to contrasting responses related to the processes of gentrification and urban requalification that are currently underway. These artistic interventions collide against the status quo, while pointing at design as a mediator between the interests of capital and the needs of communities.

This body of research shows how design in all its manifestations today reflects and moulds the dynamic of a world in constant change. By connecting memory, innovation, sustainability, and inclusion, it asserts itself as a fundamental field of action for the ideation and construction of fairer, more creative, and humane futures. May this volume inspire new dialogues and transformative actions through design, music and the arts in teaching and research for people.

interdisciplinaridade. Noutro caso, os contributos das associações de ensino da música para a formação de professores comprovam a colaboração a nível institucional no que diz respeito ao impulso das práticas e da investigação neste domínio.

No entanto, o design não se restringe apenas à área criativa e académica, mas também se estende ao campo da saúde e do bem-estar, onde uma intervenção concebida com cuidado é capaz de elevar a força mental e a resiliência dos indivíduos e, por isso, deve ser levada para os institutos de ensino, como o artigo sobre terapia vocal para estudantes de música.

A sustentabilidade é o tema principal de vários artigos. Os jovens designers de moda portugueses mostram como a criatividade pode ser usada para o ativismo social e ambiental, utilizando valores de responsabilidade durante o processo criativo. Esta preocupação encontra eco nas reflexões sobre a requalificação de habitações inadequadas para situações de emergência, como as apontadas pela pandemia da COVID-19. Aqui, propõe-se a utilização de sistemas móveis e flexíveis para a transformação do espaço, aprendendo com a história para prever soluções futuras. Por fim, o papel do design na crítica urbana e na arte pública é analisado a partir das obras de Guga Ferraz e David Hammons no que diz respeito a respostas contrastantes relacionadas com os processos de gentrificação e requalificação urbana em curso. Estas intervenções artísticas colidem com o status quo, enquanto apontam para o design como mediador entre os interesses do capital e as necessidades das comunidades. Este corpo de investigação mostra como o design, em todas as suas manifestações, reflete e molda hoje a dinâmica de um mundo em constante mudança. Ao conectar memória, inovação, sustentabilidade e inclusão, afirma-se como um campo de ação fundamental para a ideação e construção de futuros mais justos, criativos e humanos.

Que este volume inspire novos diálogos e ações transformadoras pelo design, pela música e pelas artes no ensino e na investigação para as pessoas

November 2023

Daniel Raposo, Castelo Branco, Portugal
Svitlana Derkach, Kyiv, Ukraine

novembro 2023

Daniel Raposo, Castelo Branco, Portugal
Svitlana Derkach, Kiev, Ucrânia

Case Report

DOI: 10.53681/c1514225187514391s.34.283

EVERYDAY DESIGN PRODUCTS AND LONG-TERM MEMORY: THE COLOUR INFLUENCE ON EMOTIONAL RESPONSE AND PERCEIVED USABILITY

O design de produtos de uso cotidiano e memórias de longo prazo: a influência da cor na resposta emocional na usabilidade percebida

ABSTRACT

Colour is an important component of product design and can influence usage interaction. This study aimed to study the influence of the colour of everyday products on the emotional response and perceived usability of senior adult females. Thirty women between 60 and 80 years old participated, who evaluated clay sausage roaster in three different colours, based on two protocols: Emotional Response Cards (ERC) and Perceived Usability Cards (PUC). The product in the “Terracotta” colour was significantly ($p \leq 0.05$) better evaluated (emotional response and perceived usability) than the products in the other colours (“green” and “grey”). The colour “Terracotta” was decisive in confirming that the memory factor of long-term experiences contributed to the results achieved. The application of colours in the design of products aimed at older users must consider long-term experiences and be treated as an inclusivity factor.

KEYWORDS

Colour, Product Design, Emotion, Usability Perceived.

RESUMO

Cor é um importante componente do design de produto, podendo influenciar na interação de uso. O objetivo deste estudo foi estudar a influência da cor de produtos de uso cotidiano, na resposta emocional e na usabilidade percebida de mulheres adultas seniors. Participaram 30 mulheres entre 60 e 80 anos, as quais avaliaram um produto de uso cotidiano e tradicional, em três cores distintas, com base em dois protocolos: Emotional Response Cards (ERC) and Perceived Usability Cards (PUC). O produto na cor “Terracotta” foi significativamente ($p \leq 0,05$) melhor avaliado (emotional response and perceived usability) que os produtos nas demais cores (“green” and “grey”). A cor “Terracotta” foi determinante para confirmar que o fator memória de experiências de longo prazo contribuíram para os resultados alcançados. A aplicação de cores no design de produtos destinados à usuários com idades avançadas, deve considerar as experiências de longo prazo e ser tratado como fator de inclusividade.

PALAVRAS-CHAVE

Cor, Design de Produto, Emoção, Usabilidade Percebida.



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Submission date:

04/06/2024

Acceptance date:

03/09/2024

1. INTRODUCTION

Many people who interact with everyday products experience situations that interfere with their level of satisfaction. In fact, different studies focused on use interaction processes have been developed (Unruh & Canciglieri Junior, 2018) and, despite there being a consensus that product design should meet users' expectations, there is still a lack of investigations that explain how attributes inherent to product design can influence emotional response and perceived usability. Among the various attributes of product design, colour stands out, which is based on the perception, or phenomenon of receiving a stimulus, through the visual sense, and processing information, attributing meanings to it (Moreira da Silva, 2013). The perception of colour can be influenced by physiological, cultural, age, gender, and other factors, which generate cognitive reactions in users, influencing their emotional sensations and behaviours (Heller, 2017). Therefore, colour can interfere with the perception of product composition elements, such as volume, weight, size, temperature, texture and others, which results in different emotional responses (Csillag, 2015). In general, the theoretical understanding of how the colour of a product influences emotion has already been discussed by Na & Suk (2014), Ding et al. (2021) and Alves et al. (2022); and also in the usability domain by Sonderegger & Sauer (2010) and Bonfim et al. (2023). On the other hand, there are still few empirical studies that analyze the influence of colours on product design, from the point of view of emotional responses and perceived usability. The present study aimed to analyze the influence of colour on the emotional response and perceived usability, during the interaction of senior adult females, with everyday products with the same practical function, but with different colours. This has allowed the authors to understand which aspects of interaction contribute to improving users' interaction with products.

2. MATERIAL AND METHODS

2.1. Characteristics and Ethical Aspects

The present study is characterized as inductive and descriptive/exploratory. The independent variable is colour applied to everyday products. The dependent variables are emotional response and perceived usability. The ethical aspects met the principles of integrity, proportionality, confidentiality, privacy and data protection (including anonymization and coding). Furthermore, an Informed Consent Form (in Portuguese language) was applied.

2.2. Sampling

Sampling was characterized as convenience and non-probabilistic. The inclusion criteria were: women between 60 and 80 years old; failure to report vision problems; the report of experience using the object of study; and not participate in professional activities in the area of Design. Such criteria guaranteed real experience in using the object of study, strengthening the precepts of specificity of users and tasks, in addition to limiting the judgment required in the protocols (dependent variables) to the colours of the products (independent variable). The sample size was defined as $n=30$, following the precepts of Serdar et al. (2021). Therefore, 30 women participated, with an average age of 66.27 years (s.d. 4.41 years).

2.3. Object of Study

The object of study is a traditional Portuguese clay sausage roaster (Fig. 1), shaped like a "boat" (where ethyl alcohol and grape marc spirit for the flame is deposited); and transverse

rods (where the sausage is deposited), being produced by hand in brickworks and presenting a glazed finish. The definition of this object of study was previously planned and was directly related to the definition of the sample, as it is strongly present in Portuguese gastronomic culture. Therefore, it presents a hedonic relationship with senior adults users. According to Haaksmma et al. (2018), emotional and usability evaluations are more easily applicable to hedonic products, when compared to utilitarian products, which corroborates this methodological option. The predominant colour of this product on the market is “terracotta” [NCS S 4050-Y60R] (Fig. 1-a), but for the present study, products were developed in two other colours: “Green” [NCS S 2050-G30Y] (Fig. 1-b) and “Grey” [NCS S 4010-R90B] (Fig. 1-c).

2.4. Protocols

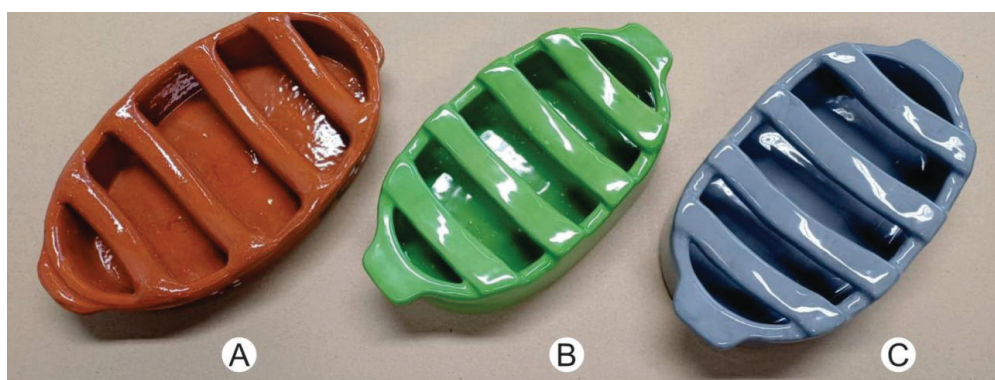


Fig. 1
Clay sausage roaster, in the colours “Terracota” [NCS S 4050-Y60R] (A), “Green” [NCS S 2050-G30Y] (B) and “Grey” [NCS S 4010-R90B] (C) (Source: the authors).

The following research protocols were used:

- 1 - Emotional Response Cards (ERC), a non-verbal self-report instrument adapted from PrEmo-2 (Desmet, 2018), composed of 14 cards, with representations of emotions with positive valences (Desire, Satisfaction, Pride, Hope, Joy, Admiration and Fascination) and negative valence (Disgust, Anger, Sadness, Fear, Shame, Borebom and Contempt);
- 2 - Perceived Usability Cards (PUC), a verbal and emoji self-report instrument, adapted from the Likert scale with three anchors (Bonfim et al. 2023), with the verbal information “easy to use”, “normal use” and “hard to use” (in the native Portuguese language) and a consonant emoji (Alismail & Zhang, 2020).

2.5. Methodological Procedures

Interaction activities occurred voluntarily and individually (Fig. 2), with prior application of the ICF. The sequence of presentation of products, ERCs and PUCs was randomized. Initially, it was reported that, although the products were similar in shape, they were different in colour. This perception was confirmed by each of the participants, who reported having already used their primary function (sausage roaster). With the availability of the ERCs, an oral instruction explained how, arbitrarily, the cards should be associated with the colours of the products. At least a single card must be associated with each of the three products; and there were no limits on the number of cards per product.

Fig. 2
Interaction activities, with application of the ERCs, developed on the [omitted for blind review] premises (A); and in a traditional district of the [omitted for blind review] city (B and C)
(Source: the authors).



At the end of the association, a photographic image guaranteed the record for data tabulation. After removing the ERCs, the PUCs were presented, with similar instructions and the express need to associate each card with a single colour. At the end, a photographic image ensured the record for data tabulation, completing the data collection stage. In general, all participants demonstrated interest and understanding with the instruments and procedures. After tabulating the data, descriptive statistical analysis was applied to obtain the frequency and relative percentage of the dependent variables. The *Cochran's Q test* ($p < 0.05$) was used to compare the degree of heterogeneity of RCTs given its property in comparing the proportion of categorical dichotomous responses (Aslam, 2023). In addition, the *McNemar's test* was used, indicated to compare responses of the same participants when exposed to different stimuli, expressed through paired binomial data (Pembury Smith & Ruxton, 2020). The degree of association between the ERCs was verified using *Cramer's V coefficient*, whose results close to zero suggest the absence of associations between the ERCs; and $V > 0.25$ indicate a strong degree of association (Akoglu, 2018). Regarding the PUC results, the Friedman test was applied to verify the heterogeneity of responses for different colours, as it compares different samples of paired data, expressed through ordinal responses (Comerlato et al., 2020). As a post hoc test, the *Wilcoxon test* (paired) with *Bonferroni Correction* was used, comparing the responses attributed to pairs of colours, since they came from the same participants.

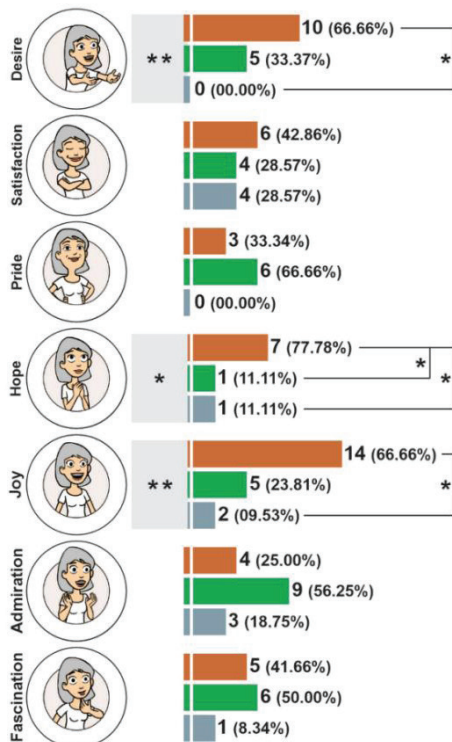
3. RESULTS

The ERC results, in frequency and relative percentage (Fig. 3), indicate that three emotions with a positive valence (Desire, Hope and Joy) and four emotions with a negative valence (Disgust, Anger, Shame and Contempt) were sensitive to the participants' emotional perception. ($p \leq 0.05$ - *Cochran's Q test*), confirming that colour was the factor that influenced this association. The degree of association between the ERCs indicated a value of $V > 0.25$. (*Cramer's V coefficient*) only among Shame and Contempt cards. The other associations presented V close to zero, demonstrating some independence in the choice of ERCs and indicating that the choice of a card does not necessarily imply the choice of another card together, reinforcing that the instrument was suitable for the present study.

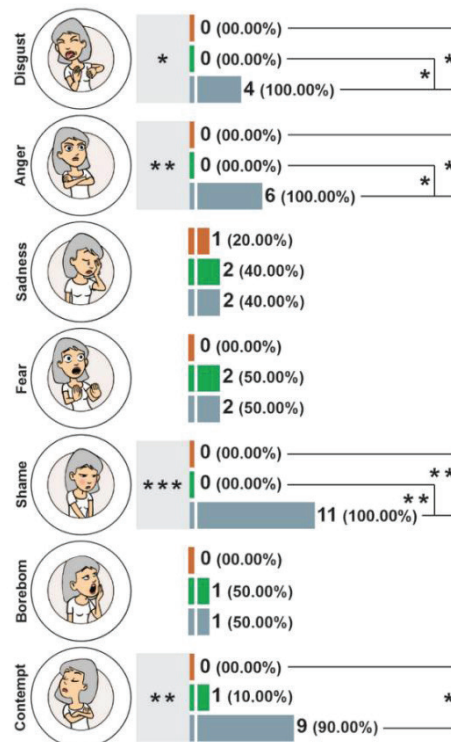
The results of the PUC, frequency and relative percentage (Fig. 4) confirm that the perception of usability was significantly ($p \leq 0.05$ - *Friedman test and Wilcoxon test*) influenced by the colours of the products (independent variable).

Emotional Response (ERC)

Positive Valence



Negative Valence



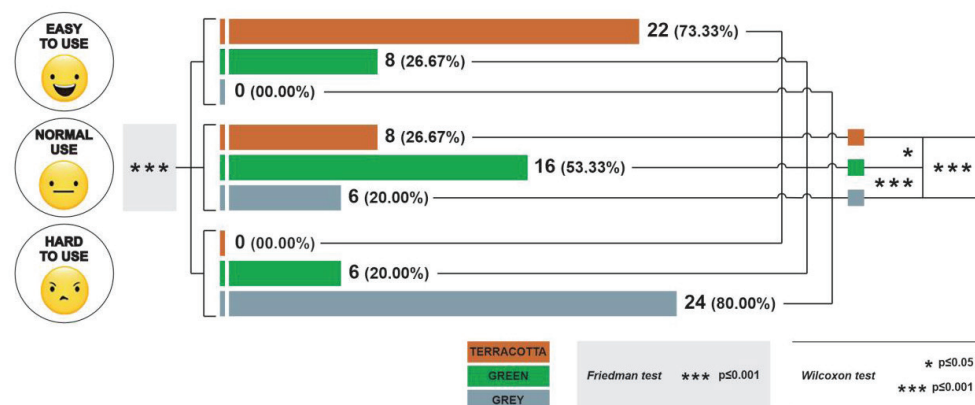
TERRACOTTA
GREEN
GREY

Cochran's Q test
* p≤0.05
** p≤0.01
*** p≤0.001

McNemar's test
* p≤0.05
** p≤0.01

Fig. 3
Emotional Response index, described in frequency (and relative percentage) for each of the emotions and each of the colours.
(Source: the authors).

Perceived Usability (PUC)



TERRACOTTA
GREEN
GREY

Friedman test
*** p≤0.001

Wilcoxon test
* p≤0.05
*** p≤0.001

Fig. 4
Perceived Usability index, described in frequency (and relative percentage), for each of the perceptions and each of the colours.
(Source: the authors).

4. DISCUSSION

The design of a product can be considered one of the most important elements that influence use interaction, impacting (positively or negatively) users' emotional responses and perceived usability. Its physical structure, made up of numerous attributes, among which colour stands out, is what materializes the user interface. The present study, of an empirical nature, aimed to analyze the influence of colour on the emotional response and perceived usability of users, during the interaction with a product for everyday use.

In general, the results indicate that, in relation to emotional response, the colours of the products were decisive for the significant differences ($p \leq 0.05$ - Cochran's Q test). In this case, in the emotions Desire, Hope and Joy (positive valence), the terracotta colour product

was significantly ($p \leq 0.05$) better evaluated than the grey colour, with the same difference occurring ($p \leq 0.05$) in relation to the green product. Regarding the emotions Disgust, Anger, Shame and Contempt (negative valence), the product in grey colour was significantly ($p \leq 0.05$) worse evaluated when compared to products in terracotta and green colour (this last comparison is not observed in the Contempt emotion), being highly significant ($p \leq 0.01$) in the Shame emotion. When the analysis was restricted to perceived usability results, the colours of the products were also responsible for strongly significant differences ($p \leq 0.001$ - *Friedman test*). When comparing the colours in pairs of results, the grey product again emerged as the worst evaluated, when compared with the green and terracotta products ($p \leq 0.001$). Most participants expressed “strangeness” with the green and grey colours applied to the clay sausage roaster, as they only knew this product in the “terracotta” colour. This “strangeness” was probably enhanced by the experience memory factor, which is a component of emotion in the user experience. According to Yang & Chen (2008), reflexive interactions between users and products are related to memories of experiences arising from long-term interaction (as is the case in the present study), in which the product establishes a positive perception, making symbol of memories of happiness. In fact, the terracotta-colored product presents itself as part of the life story of these participants. Therefore, the relationship between user and the product, and the meaning that this relationship represents, is what probably resulted in a more positive emotional reaction with the terracotta-colored product, then represented in the ERC results.

According to Sonneveld & Schifferstein (2008), current experiences receive contributions from memories of past experiences. Furthermore, previous use of a product allows you to learn aspects of its characteristics, which are kept in long-term memory, contributing to a better perception of usability (Clarkson, 2008). This helps explain the better perceived usability results of a product of a specific colour, as opposed to the same product of a different colour. Regarding emotional reactions, Alves *et al.* (2022) evaluated different kitchen utensils (garlic peeler) in red, green and grey colours, using physiological protocols (FaceReader™) and self-report (SUS and preference scale), with middle-aged women (30-55 years). In this last protocol (preference scale), the grey product was worse evaluated ($p \leq 0.01$), when compared to the products in red and green colours. And, specifically regarding the perception of usability, Bonfim *et al.* (2023) identified that, for senior individuals (men and women between 55-75 years), the perceived effort to open transparent mineral water packaging was significantly lower ($p \leq 0.05$), compared to packaging with a non-traditional colour (red); and also in relation to the younger user group (18-29 years). Despite the fact that these are different groups of users and different protocols, we can state that the results of these studies corroborate our findings; and suggest that the application of colour for this category of products needs to be well planned, controlling the Design process so that it does not cause a negative impact on the interaction of use. Furthermore, it is important to highlight that such findings do not simply serve to identify the best (or worst) colour to be applied in the design of a specific product, but rather to confirm that colours imply different emotional and usability conditions (the which confirms the findings of other studies) and, mainly, safely indicates that the long-term memory factor seems to have been preponderant in this case. Thus, these results corroborate the statement that the application of colours in product design, whose potential users are older, should be treated as a factor of inclusivity for these individuals, which is recommended by Moreira da Silva (2013).

5. CONCLUSION

Colour is an essential component of product design, and the results of the present study indicate that it influences emotional response and perceived usability. In this sense, the application of colours in product design, especially in cases where the main users are older people, must consider long-term memories, mainly aiming to expand the inclusive character of the design.

ACKNOWLEDGEMENTS

The authors gratefully acknowledge the support of CNPq - Brazilian National Council for Scientific and Technological Development (Grant - 308121/2022-8); by CIAUD – Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, ULisboa, and by FCT – Foundation for the Science and Technology, Portugal.

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

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Reference According to APA Style, 7th edition:

Paschoarelli, L. C., Silva, J. M. N. & Silva, F. M. (2024) Everyday design products and long-term memory: the colour influence on emotional response and perceived usability. *Convergências - Revista de Investigação e Ensino das Artes*, VOL XVII (34), 15-23. <https://doi.org/10.53681/c1514225187514391s.34.283>

Case Report

DOI: 10.53681/c1514225187514391s.34.261

UNDERSTANDING TYPICAL EMOTIONS IN THE DESIGN PROCESS

Compreendendo as Emoções Típicas no Processo de Design

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ABSTRACT

Designing for users with varying physical and physiological requirements might be difficult for junior design students from the new generation. Understanding users encompasses not just what is tangible but also the emotional components of users' lived experiences. They must be taught how emotion may influence judgment and even the results of a design. In the decision-making and cognitive thinking stages of the design process, certain typical emotions are engaged. Information processing and decision-making are the major variables affecting these typical emotions. Thus, It's crucial to concentrate on the normal emotions that design students experience and to get younger designers ready for their emotional shifts as the process of design develops. Hence, junior design students do not yet easily practise design and need assistance to navigate the design process. The identification of forty common emotions in the design procedure is based on a comprehensive review of existing literature and input obtained from focus group research. To enhance the design learning experience, a novel model is developed to visually represent these typical emotions. This study provides an understanding of how junior design students could manage their design process effectively.

KEYWORDS

Design Process; Types of Emotion; Cognition; Creativity; Design Education.

RESUMO

Projetar para usuários com requisitos físicos e fisiológicos variados pode ser difícil para os estudantes juniores de design da nova geração. Compreender os utilizadores abrange não apenas o que é tangível, mas também os componentes emocionais das experiências vividas pelos utilizadores. Devem ser ensinados como a emoção pode influenciar o julgamento e até mesmo os resultados de um design. Nas fases de tomada de decisão e pensamento cognitivo do processo de design, certas emoções típicas estão envolvidas. O processamento de informações e a tomada de decisões são as principais variáveis que afetam essas emoções típicas. Assim, é crucial concentrar-se nas emoções normais que os estudantes de design experimentam e preparar os designers mais jovens para as suas mudanças emocionais à medida que o processo de design se desenvolve. Consequentemente, os estudantes juniores de design ainda não praticam o design com facilidade e precisam de assistência para navegar no processo de design. A identificação de quarenta emoções comuns no procedimento de design baseia-se numa revisão abrangente da literatura existente e nos contributos obtidos a partir da investigação de grupos focais. Para melhorar a experiência de aprendizagem de design, um novo modelo é desenvolvido para representar visualmente essas emoções típicas. Este estudo fornece uma compreensão de como os estudantes juniores de design podem gerenciar seu processo de design de maneira eficaz.

PALAVRAS-CHAVE

Processo de design; Tipos de Emoção; Conhecimento; Criatividade; Educação em Design.

Submission date:

05/12/2023

Acceptance date:

24/09/2024

1. INTRODUCTION

The design process is a complex, innovative and sophisticated process that involves multiple types of information integration. When developing for users, designers are required to take into account a range of factors, including but not limited to space, shape, image, light, colour, composition, and material. Furthermore, they must also address the emotional, social, and physiological complexities associated with the particular project. Experienced designers engage in design processes as a habitual and standardised procedure, characterised by unconscious stages or activities rooted in established design principles and practices (Mandala et al., 2018). However, junior design students often find it challenging to manage the design process, especially when dealing with their emotional changes as they learn to juggle multiple kinds of information and assess the relationships between them.

The challenge of designing for users with varying physical and physiological needs is even more significant for junior design students of the new generation. Therefore, it is crucial for junior design students to comprehend the physical, physiological, and emotional experiences of the majority of users, not just what is seen at face value. An understanding of emotional aspects can help them make decisions that lead to the safety and well-being of users. Although simulation techniques have been effective in the design profession, a few junior design students understand the emotional shifts throughout the design process. Before junior designers can understand the importance of emotional shifts, they need to know which emotions effectively affect the design process. Hence, to design educators should devise strategies aimed at facilitating the cognitive and emotive development of novice design students while successfully integrating emotional transformations. Sensitivity to the guidelines of the simulation could facilitate emotion management abilities, thereby showing the influence of affective skills development on students. This paper aims to investigate the typical emotions that affect the design process and identify methods to enhance junior designers' skills in managing emotional changes. This study aims to explore the variability of human emotional regulation capabilities and assess the influence of emotional skill enhancement on students. The primary objective is to acquire a comprehensive understanding of these factors. These modifications clarify the objectives of the study and emphasise the significance of understanding emotional shifts in design students as they navigate their educational journey.

2. EXPLORING THE INTERSECTION OF COGNITIVE THINKING AND EMOTIONAL INTELLIGENCE IN DESIGN EDUCATION

2.1. The role of cognitive architecture in enhancing design processes

The apparent ease with which experienced designers navigate the design process stems from their cognitive architecture. Researchers have shown that two kinds of memory work together in this architecture working memory and long-term memory (Ho & Siu, 2012). Working memory processes, the input and links new knowledge with the long-term stored knowledge, creating interconnected webs of knowledge known as schema. Through significant and connected schemata, experienced designers can function effectively, automatically, and in an organised manner by breaking down vast amounts of knowledge into limited working memory chunks. This is especially true for designing highly complex domains such as the elderly or physically handicapped people.

Effective cognitive thinking is critical in determining how efficiently learners studying complicated domains can learn. Studies have indicated that novice design students often rely on trial-and-error approaches, which quickly exhaust working memory and provide little room for developing new schema connections because they lack organised schemata

(Smith et al., 2019). Three types of cognitive processing are intrinsic processing, relevant processing, and tangential processing. Designing for the elderly is a challenge that calls for deep consideration of the task's inherent complexity, or 'intrinsic thinking.' And the brain's ability to form new schema connections depends on meaningful thinking. Research has shown that intrinsic reasoning is enhanced when emotional intelligence is integrated into learning processes (Jones & Brown, 2021). The term 'extraneous thinking' is used to describe mental processes that are not necessary for the completion of a task, such as daydreaming or ruminating. In complex design studies, elevated cognitive demands might consume working memory and hinder learning.

2.2. Cognitive thinking and emotions

In the context of intrinsic reasoning, the addition of affective abilities increases task complexity. Junior design students in design programs should apply empathy to get the user's perspective on the environment or product they are creating. With this newfound understanding, they can settle on the best course of action for the design (Walther et al., 2017). Developing empathy is a skill that can be taught to beginning designers; doing so is essential for creating products that people want to use). Engaging in such a pursuit necessitates a level of complexity in learning and design that goes beyond what is strictly necessary. Therefore, it is vital not only to maximise cognitive learning potential but also to acquire the abilities needed to make suitable design judgments. Several studies have theorised a robust link between emotional experiences and cognitive assessments of those experiences (Davis et al., 2020). However, the precise function of individual feelings in the academic process is still up for discussion. For instance, studies have shown that students' capacity to manage abstract thought and problem-solving technique selection can be impacted by their emotional state, which can be both good and bad (Xue et al., 2020). An individual feels a variety of emotions, including fear, amusement, rage, pleasure, regret, and desire (Desmet, 2018). Instead of a single feeling, the mixture of different emotions leads to an enjoyable experience. Research has indicated that unpleasant emotions like perplexity might foster deeper engagement with learning materials (D'Mello et al., 2014). These aspects are usually regarded as belonging to the psychological discipline instead of design disciplines. Few design researchers engage in developing these fields and applying them as cross-disciplinary studies involving design and emotion. Emotional reaction and inclusive human concerns are of paramount importance in design. While individuals become increasingly sensitive to dimensions of things that transcend conventional characteristics of usefulness, the need to comprehend and establish emotional and aesthetic connections between people and products grows. Similarly, the idea of experiencing, where the subject and object meet and integrate, is a crucial factor in the development of emotionally significant goods. This is because experience is a place where all faculties, particularly emotions, are aroused. This corresponds to the theory of attachment between people and objects, in which, at the height of love, the border between the personality, as well as the object, threatens to dissolve. More study is needed to determine how emotions affect junior-level design students' capacity for effective emotional responses and how certain components of learning interventions promote such responses (Jokinen & Silvennoinen, 2020).

Some design scholars' writings on design studies rely even more strongly on psychological concepts (Markussen, 2017). In subsequent research, enhanced concepts on how designers might implement the dominant assessment theory from the psychology of emotion are investigated. By analysing the distinctive evaluation components in people's accounts of emotional experiences with items, scholars attempt to develop design-specific assessment structures (i.e. appraisal theory) for emotions such as pleasure, happiness, and disappointment. Markussen (2017) utilises the same evaluation theory and 'blends' it with embodied cognition, a major theory in cognitive science, to explain why patients, have such a broad variety of views about utilising interactive healthcare systems. Markussen's theoretically-informed research of the interaction with a blood-drawing robot gives insight into how consumers produce new evaluations of objects (via the blending of conceptual structures) that evoke fresh or different emotional responses than the individual assessments.

2.3. Enhancing design processes through a human-centred approach

Designers who show the capability to perceive user experience demonstrate a fundamental emotive talent that is crucial for understanding the individuals who interact with their designs (Esser, 2018). This ability, described as ‘empathy,’ involves the capacity to feel ‘as if one is the user’ by taking on their perspective to relate to situations. The authors emphasised that this ability is derived from an understanding of user experience and design practices. Therefore, proficient designers employ their capacity to comprehend user experience to discern and incorporate the perspectives, feelings, and anticipations of others into efficacious design solutions.

Empathy and user experience are fundamental elements of human-centred design that significantly impact functional design outcomes (Hassenzahl & Tractinsky, 2020). The Council for Interior Design Qualification, whose scope of practice definition guides environmental designers’ proficiency on a national level, has noted that the profession relies on human behaviour and theories addressing well-being. Their research revealed that designers’ primary responsibility is the emotional needs of people (Professional Standards — CIDA, 2018). Therefore, it is imperative to incorporate training programmes for undergraduate design students that enable empathetic skill development, given that this ability is necessary for designers to achieve their design goals.

The influence of emotions on learners’ engagement with relevant learning material is significant. In light of this, it is essential to explore the methods of integrating emotive abilities, particularly empathy, into the undergraduate design curriculum. Furthermore, the field of design education, which prioritises human-centred design, provides an ideal setting for the examination of the impact of instructional methods on the development of sympathetic abilities.

3. DESIGN AND EMOTIONAL CONCEPT IMPLEMENTATION IN THE DESIGN PROCESS

3.1. Emotion-related experience in the design process

The emotions of anger, sadness, disgust, joy, and so on have been discovered to influence junior design students’ thinking. In design practices, sadness or anger is felt when the proposed design project is rejected, and joy and pride are felt when the proposed design project is praised. Sometimes, emotions are evoked outside the design process, such as excitement aroused by good grades and fear and stress caused by studying. However, junior design students are seldom able to notice emotional changes during their design process. They also lack experience in managing their emotions and going through the design process without hindrance. Junior design students may have the possibility to be unable to control their emotional changes. When they are nervous, they may be unable to use their inner strength. When they suppress their anger, they may be carried away by their sense of dignity and make wrong judgments.

The emotion of fear is an unnoticed emotion among designers although psychological studies have argued that fear functions in the human brain (Guerra & Tripp, 2018). Some scholars proposed that designers should be able to avoid failure in reaching the design goals through knowledge and theory and should not have to rely on fear information in thinking, those evoking negative emotions. As long as they learn to deal with potential threats to design material, designers will pay more attention to making decisions and successfully avoid potential dangers. Designers can understand more abstract and potential threats, such as radiation’s harmful effects on the physical body. The experience of fear is conducive to creating a sense of stress. When designers reflect on themselves, they can immediately prevent threats from occurring and return to their original state. Some effective methods of doing so are to calmly observe the changes in the body, such as the increase in the heartbeat.

The emotion of calmness is not presented and noticed because a calm state is the most 'normal' state for designers. When designers are in a long-standing space and doing a regular job, they are basically in their comfort zone and feeling calm. When the brain is calm, it secretes dopamine and serotonin normally. The prefrontal lobe also works actively, so designers can think logically and make correct judgments. When faced with problems, designers put aside subjective feelings and other troubles, let their frontal lobes work hard, and think objectively about the impact of these problems. Designers view comprehensive contexts with calm emotion, including whether they are more concerned about the relationship between designers and customers in the long run. If designers keep training themselves like this, they can develop the ability to respond to their emotional changes without losing their logical thinking ability.

3.2. Typical emotions in the design process

However, many junior design students do not fully notice that the eight primary emotions are categorised based on users' feedback regarding their design consumption. This means these emotions are elicited by the external environment but may not be active in further cognitive thinking. This is a gap in previous design and emotion studies. In the design process, designers' emotions are a response to their external environment and influence their decision-making. Emotional changes from users' viewpoints might not work the same way. Users' emotions result in their response to their external environment. According to the qualitative research findings in design & emotion studies (Mahan, 2021) and appraisal theory (Jokinen & Silvennoinen, 2020), users' emotions can influence the design process. Therefore, investigating potentially workable emotions in the design process is necessary. By reviewing the appraisal theory, the research team learned some basic emotions. Then, the theoretical descriptions of basic emotions were examined during the review of design studies and practices, and different types of typical emotions were identified in the design process (Tab. 1). Hence, some typical emotions were reconsidered and incorporated into a new model to illustrate the relationships between emotions and typical emotions in the design process (Fig. 1).

No.	Emotion Category	Emotion
1.	External Negative	Nervousness
2.		Hatred
3.		Regret
4.		Discouragement
5.		Anger
6.		Jealousy
7.		Dissatisfaction
8.		Fear

Tab. 1
Forty proposed typical emotions were identified in the design process.

Tab. 1 (continuation)

Forty proposed typical emotions were identified in the design process.

No.	Emotion Category	Emotion
9.	Internal Negative	Sadness
10.		Frustration
11.		Loneliness
12.		Disgust
13.		Inferiority
14.		Anxiety
15.		Stressed
16.		Longing
17.	Natural	Calmness
18.		Sympathy
19.		Affection
20.		Touched
21.		Satisfied
22.		Peacefulness
23.		Commitment
24.		Interest
25.	Internal Positive	Pleasantness
26.		Affinity
27.		Curiosity
28.		Pride
29.		Anticipation
30.		Respect
31.		Healing
32.		Gratefulness
33.	External Positive	Joy
34.		Happiness
35.		Excitement
36.		Superiority
37.		Courage
38.		Relief
39.		Energetic
40.		Enjoyment

3.3. A Model illustration of the relationships between emotions and typical emotions in the design process

The incorporation of emotion is a significant factor in the design process (Ho & Siu, 2012). It is critical to teach junior design students how emotion may influence the decision-making process and even the ultimate design output. To demonstrate how some typical emotions are classified in the design process, a new concept model (Fig. 1) is built. Not every emotion would be observed in the design process. Some typical emotions are those that are relatively obviously engaged with the cognitive thinking process and decision-making in the design process. Information processing and decision-making mostly influence these typical emotions.

They create motivation and influence further actions and judgments rather than only working as a kind of mood or feeling. These typical emotions can be categorised into five main types in Fig. 1: external positive, internal positive, neutral, external negative, and internal negative. This concept can be illustrated with the Fig. 1 model: During the design process, some external dominations, such as material allocation, emphasise stimulation from external sources rather than personal ones (i.e. designers' consideration). The internal dominations, such as designers' personal preferences, emphasise personal consideration rather than stimulation from the external environment. Neutral emotions are responses to relatively balanced interactions in both external stimulations and personal consideration. Positive emotions refer to a range of desirable reactions in response to various situations, characterised by pleasant feelings of curiosity, satisfaction, love and pleasure, among others. It is important to note that positive emotions are distinct from pleasurable physical sensations and general positive effects. Negative emotions are any feelings that make designers feel unpleasant and sad. These feelings cause designers to loathe themselves and others, destroy designers' confidence and self-esteem, and diminish their overall sense of well-being. As the model in Fig. 1 illustrates, typical emotions in the design process can change or shift according to the experience of, investigated information about, and observation of a designer regarding themselves and users. For example, excitement as a part of external positive emotions would be digested and shifted to curiosity as a part of internal positive emotions. This would arouse in designers a deep desire to learn about the unknown and the nature of things. Additionally, anxiety as part of internal negative emotions would be digested and shifted to peacefulness, a mental state of tranquillity that is a part of neutral emotions. When designers' minds are cluttered with worry and task lists, it can be beneficial to replace them with more peaceful thoughts. The change can enhance or weaken design outcomes. Both emotions and cognitive thinking are significant in the design process. Balanced responses to critical issues result in balanced design choices and processes. The investigation of design processes is informed in part by designers' experiences with techniques that facilitate cognitive thinking and emotional management in design processes. A balanced approach that incorporates both reason and emotion is the foundation of the proposed model. The possibility of including both emotions and thinking in the design process is investigated. The model contains 40 typical emotions that are a part of the design process. It explains the ideas of emotion, thinking, and emotional management as well as examines their relationships. It is an excellent beginning point for further developing our knowledge of how designers' emotions manifest, fluctuate and interact with one another. It will influence subsequent design and emotion research in this field and be the starting point for designers' investigation of emotions.

4. RESEARCH METHODOLOGY

4.1. Research questions and research procedures

Presently, the scope of design education for novice designers is limited to facilitating the application of theoretical knowledge acquired from lecture-based courses on human-centred subjects such as empathic design and user experience, to address issues presented in design studio projects. Regrettably, novice design students frequently have a sense of being overwhelmed while engaging in problem-solving activities. They encounter difficulties in discerning significant attributes of emotional fluctuations and exhibit a deficiency in their capacity to generate effective solutions to problems, although they possess the necessary information. This challenge has been a source of frustration for designers, and researchers across various design fields for decades, highlighting the difficulty of effective and dependable approaches to tutoring novice designers in dealing with aspects affecting the design process that are emotion-related (Shadle et al., 2017). Accordingly, determining effective ways to educate junior design students on the mutable emotional needs of users and audiences is of utmost significance.

Emotional experiences have significant roles in the design process. However, exploring these experiences can be a challenge for rookie design students. Hence, to develop necessary

strategies for educating junior design students on managing their emotions during the design process, the research question, ‘What categories of emotions do junior design students discern when engaging in the manipulation of their design process?’ was posed.

To generate potential research directions to address the research questions identified earlier, this study employed a qualitative research methodology utilising focus group discussions to gather in-depth insights into the emotional experiences of junior design students during the design process. Three focus groups were conducted, each with six to eight participants, to accommodate a total of 20 junior design students from a variety of design disciplines, such as interior design, product design, and graphic design. Participants were selected based on specific criteria: they must be enrolled in a design program at a recognised university and have completed at least one year of design coursework to ensure they possess foundational

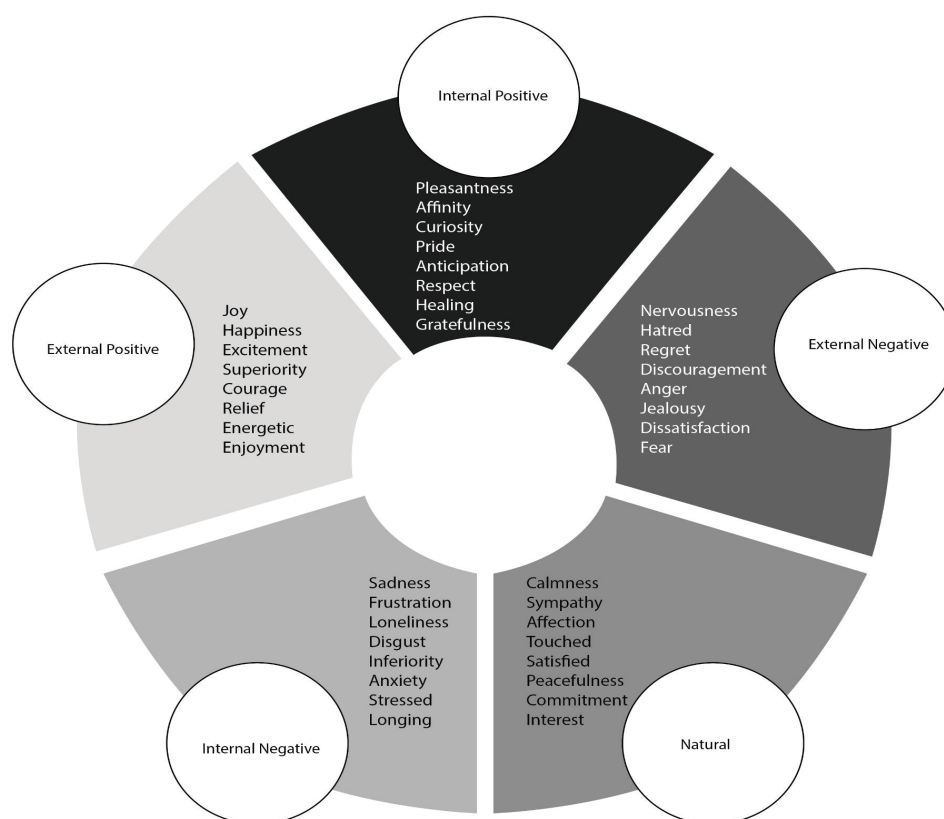


Fig. 1

Forty emotion categories.

knowledge and experience in the field.

Demographic data collected included age, gender, year of study, and specific design discipline. This information was crucial for understanding the diversity of emotional experiences across different backgrounds within the design field. The focus groups were facilitated by trained moderators who guided discussions using open-ended questions designed to elicit participants' feelings and thoughts about their emotional shifts throughout various stages of the design process.

Each session was audio-recorded with the participant's consent for subsequent transcription and analysis, and it lasted approximately 90 minutes. To ensure a comfortable environment, focus groups were held in familiar settings such as university classrooms or lounges, where students felt free to express their thoughts openly. The discussions focused on identifying specific emotions experienced during key phases of the design process, including ideation, prototyping, and feedback reception.

To find recurring themes and patterns in emotional experiences, thematic analysis was used to analyse the data. The findings from these focus groups informed the identification of forty common emotions encountered by junior designers, providing a robust basis for developing a novel model that visually represents these emotions. This approach not only enhances the credibility of the research but also ensures that the voices of junior designers are accurately captured and represented in the study's outcomes. These modifications enhance transparency and credibility by providing detailed information about participant demographics and selection criteria within the focus group methodology.

4.1.1. Phase 1: examining the role of emotion in the design process

The first phase of the study involved the adoption of the Phase 1 design project, whereby participants were invited to independently manipulate design projects using an emotion-tracking application during research, material allocation, and idea generation stages. The purpose of this phase was to identify the emotional responses of novice design students during their design processes. Data was not collected in this phase, and the focus was solely on understanding the emotional components involved in the design process.

4.1.2. Phase 2: providing design principles for emotional control

In the second phase, an introductory lecture was conducted to assist novice design students in learning how to manage their emotions during the design process. The attendees of the lecture were present to examine the results of the initial phase, gain comprehension of the optimal emotional reactions that would augment their decision-making abilities in the realm of design, and participate in a range of educational exercises that acquainted them with the concepts of design and emotion. By summarising prior research on psychology, design, and emotions by Southward et al. (2021), the critical principles of design and emotional management in the design process were identified as self-awareness, self-regulation, internal motivation, empathy, and design and emotional competence. *Self-awareness* refers to the step of understanding self-emotional changes and their effect on others (Gómez-Maureira et al., 2021). *Self-regulation* refers to the step of controlling disruptive impulses, thinking before taking action, and considering the effect of expressions and self-emotional changes on others (McClelland et al., 2010). *Internal motivation* refers to the step of working for internal reasons that go beyond profit and status (Reeve, 2018). *Empathy* refers to the step of understanding end-users and the audiences' emotions and responses (Zaki, 2020). *Design and emotion skills* refer to the step of controlling relationships as well as building up emotional attachment with the audience through design executions (Ho & Siu, 2012). These five core components of design and emotion comprise the principles of the design and emotion concept configuration in the design process. Next, Phase 2 of the design project was started. Data were not collected in this phase. The primary goals throughout this stage were to offer participants intellectual stimulation and an enhanced understanding of the linkages between design and emotion, to facilitate their ability to identify and discern their own emotional experiences.

4.1.3. Phase 3: individually evaluating the efficacy of proposed principles

In the third stage, participants were invited to understand their emotional changes by attending a focus group and sharing their emotion management methods. The primary aim throughout this phase was to articulate emotional transformations and assess the efficacy of the suggested principles on an individual basis.

4.2. Research Participants

The present empirical study invited second-year undergraduate students studying design in Hong Kong to participate. The participants were unfamiliar with the concept of emotions

in the design process, and this fact positively contributed to strengthening the generalisation of the research results. The participants in this study developed a foundational grasp of design principles after engaging in a two-year programme that covered many aspects of design, such as design thinking, user experience, and design outcomes. Additionally, they gained a rudimentary comprehension of the design process within a very brief timeframe. Nevertheless, their attitudes towards design and established methodologies for controlling the design process have not yet fully evolved. Although participants were not conversant with the concept of ‘design and emotion,’ their incremental application of these concepts to the design process was anticipated, and reflections on their design manipulation would amply reflect the emotional transformation that had occurred. The study included 30 participants who were natives of Hong Kong and spoke Cantonese as their mother tongue. They received an English-medium university education and were fluent in English, as well as being able to acquaint themselves well with Western concepts.

5. RESEARCH FINDINGS

5.1. Types of emotions identified in the design process of junior design students

After obtaining experience in the design projects in Phase 1 and Phase 2, the participants were invited to share this experience in the focus group. Feedback on the participants’ design projects was collected through their discussion. The data were gathered and presented in a transcript. The required workload in Phase 1 and Phase 2 design projects was similar. Based on the feedback from participants, 40 emotions, including loneliness, disgust, shame, inferiority, anger, and anxiety, were identified (Fig 2). Calmness was the emotion mentioned most in the focus group (5.33%; Fig 2), followed by anxiety, touched, commitment, healing, curiosity, excitement and enjoyment (4.00%; Fig 2). Then there followed by hatred, regret, discouragement, fear, longing, sympathy, peacefulness, interest, pleasantness, joy, happiness, courage, relief and energetic (2.67%; Fig 2). Finally, the least frequent emotions mentioned are anger, jealousy, sadness, frustration, loneliness, disgust, inferiority, stressed, affection, satisfied, affinity, pride, anticipation, respect, gratefulness and superiority (1.33%; Fig 2). The percentages of the emotions are summarised in Fig 2.

6. DISCUSSIONS ABOUT THE RESEARCH FINDINGS

As per the participants’ feedback, they had not received prior education in emotion management or self-awareness, indicating unfamiliarity with these concepts. A few participants expressed uncertainty about the type of emotions experienced while working on the assigned design task. Participants pointed out that designers would work better under a calm state of mind because they could think logically and make good decisions. Participant 5 mentioned, ‘I think a calmer and less emotional state can improve my learning because I can receive more knowledge when I am calm’. The feedback from the participants indicated that when feeling calm emotions, designers put aside their own feelings and other problems and think about the design problems objectively. This finding would enhance the knowledge of emotion’s functions in the design process as mentioned in the literature review. Participant 5 mentioned, ‘I think I feel better when a person settles down or is still because they will concentrate. I think a peaceful and calm environment is better because if there are too many people talking on the side, I can’t concentrate on it, but if it’s alone, I can go and think clearly about it – what an idea’. Designers have to consider a wide range of situations, including long-term concerns about the relationship between designers and customers. Calm people will be able to make good decisions because they will have peace of mind. Participants’ feedback reflected that if designers keep practising calmly, they will be able to learn how to respond to problems quickly without giving up their logical thinking.

Participants also emphasised that both negative and positive emotions can help designers work effectively from different aspects. People experience a wide range of feelings as mentioned in the literature review (Desmet, 2018; Walther et al., 2017). The experience is more satisfying since it is not dominated by any one emotion. Positive emotion helps designers communicate with others. Participant 6 stated, 'I think it may be more positive to be able to communicate with other people about emotions, and it will be easier to learn if you communicate or talk with other people more'. Participant 4 stated, 'I feel happy and excited. Listening to my own preferences will make me more comfortable, or I think anxiety will be effective for me because when I'm stressed, I want to be anxious and want to get things done quickly'. Alternatively, some

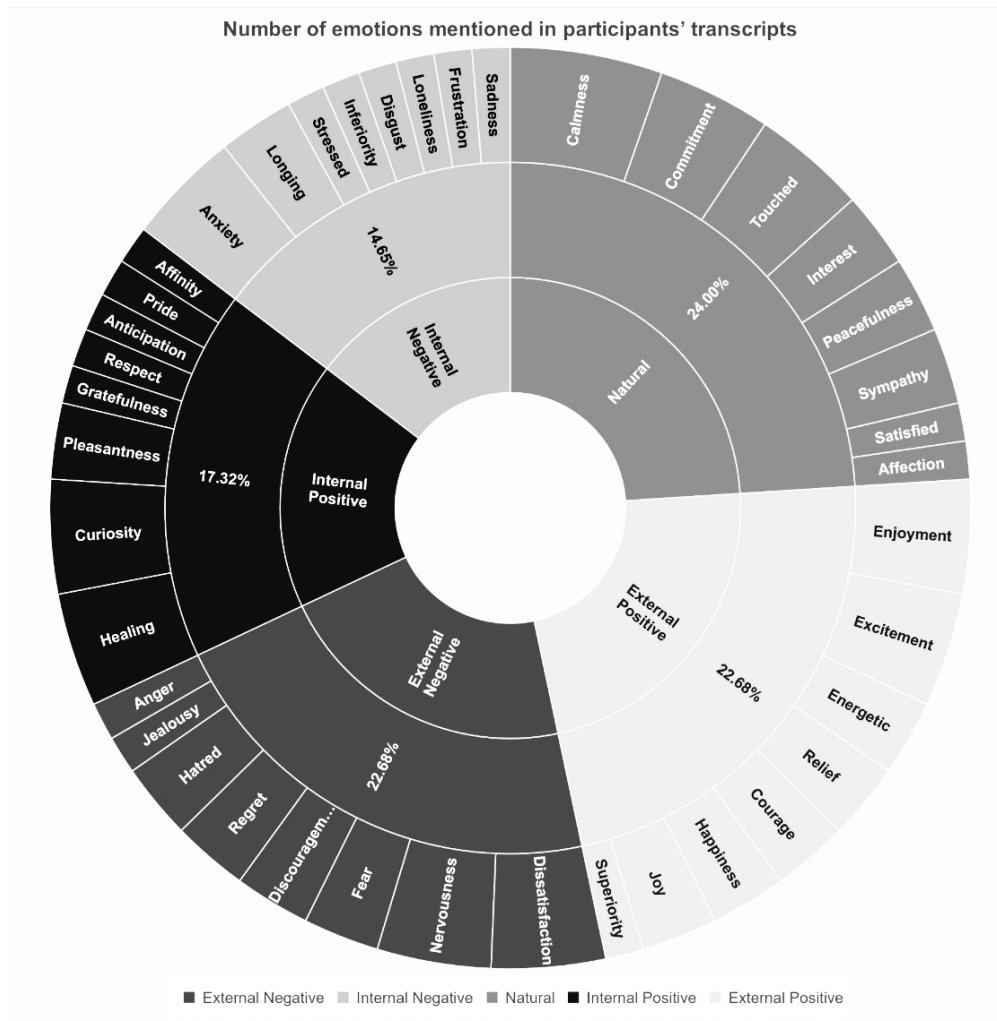


Fig. 2
Chart comparing emotions mentioned in participants' transcripts.

participants argued that designers should be able to avoid threats by relying on knowledge and theory rather than on fear-based information. For example, product designers can prevent risk as long as they learn to cope with possible threats while selecting raw materials. Participants agreed that designers can comprehend more abstract and potentially dangerous concerns. Participant 1 mentioned, 'I would feel the difference between me and Cherry. In my case, personal comfort is the priority. Cherry will be able to cope with life first. It seems that I have been forced out of some ideas, so I prefer to go there and find a point that interests me, and then I will go deeper into this and do my homework'. Participants' feedback confirmed that emotions' potential to influence danger perceptions extends to a fundamental mechanism inherent in threat detection. Designers were instructed to make fast judgements about whether target persons were carrying firearms or neutral items while feeling various emotions. Anger increases the likelihood that neutral things will be mistaken for those associated with violence, but not vice versa. Negative emotion-induced bias in design conceptions can be corrected with appropriate skill.

Some participants emphasised that they work better when curious. Participant 1 mentioned, 'Personally, I think it is more effective to be curious and interested and achieve my expected learning outcomes . . . Because only when I am interested in such things, I will first have the motivation and look forward to the results, so I will have more strength to do it first and keep trying to design homework and collect various materials. A curiosity, if you are interested in doing it, it will not be so hard'. Participant 3 concurred, 'I think when I learn something that I find interesting and when I talk about it in class, I am interested in this and I am passionate about a certain design . . . In other words, you will push yourself to learn; that is, you will make yourself want to learn more, and if you have homework at the time, it will help you learn'. Participant 4 stated, 'I think high emotions will help me learn a lot because excitement tells me that my mental state will be better . . . This kind of emotion will make me learn faster'. Some participants pointed out that curiosity led them to do more practice. Participant 2 stated, 'Actually if you're not interested in this kind of thing, you will be unable to achieve your expected learning outcomes'. The feedback from participants indicated that the concept of curiosity plays a role in the design process, in line with previous scholars' findings (Harley et al., 2019; Montambeau, 2018). Curiosity is one of these emotions that often results in information-seeking and motivating activities. A design using curiosity principles can adequately arouse the interest of participating designers in engaging with the design.

7. CONCLUSION

During the early 2000s, there was an upsurge of interest among design researchers in exploring the interplay between emotional factors and design. A significant amount of research was conducted during this period focusing primarily on the user's perspective. The design process encompasses not just rational and logical considerations but also designers' techniques, experience, and abilities, as well as their reactions to the external environment or the stimulants in their immediate vicinity. These ideas offer an adequate theoretical foundation, but few research studies have examined, during the design process, how junior design students' emotions evolve. Junior design students may have difficulty processing information from sources that require extensive engagement with other people. The need to bring these ideas into the design processes of junior design students and influence the manipulation of these processes has been identified. This study identifies and analyses the forty common emotions that junior design students experience during the design process and also highlights the importance of emotional awareness in effective design practice. Getting a handle on those emotions is important not just for helping students refine their own individual design processes, but also for making design education better. Understanding how emotions affect decision-making and cognitive functioning will enhance educators' abilities to prepare students for the nuances of design problems. The results highlight the need for integrating emotional intelligence training within design programs so that students can cultivate the skills necessary to regulate their emotional reactions. This practice positively impacts students on a personal level and also allows them to create user-centred designs that find a greater emotional connection with their target consumers. Then, in the longer term, further research should consider the effect of emotional management training on design outcomes and student satisfaction. It is also going to be crucial to investigate how different teaching methodologies can be adapted to integrate emotional intelligence more effectively. Furthermore, interdisciplinary research exploring the relationship between psychology and design would likely provide useful knowledge on how emotional dynamics affect creativity and innovation across genres of design. In summary, let us not forget we are training designers with emotions, and (good) design must interpret and feel what emotions are happening with the users it is designed for. In an increasingly complex world, this holistic understanding will lead to design solutions that are more considered, more empathetic and more impactful over time. These changes offer a wider lens through which to consider the study's finding's impact on design education and practice and point towards future research opportunities.

ACKNOWLEDGEMENTS

This work was supported by the Faculty Development Scheme [Grant number UGC/FDS16/E06/19] the University Grants Committee, Hong Kong SAR.

We would like to express our gratitude to the participants who took part in this study. This research was conducted by following the ethical guidelines outlined. All participants provided informed consent, and their privacy and confidentiality were strictly maintained throughout the study. We are grateful for their valuable contributions, which made this research possible.

CONFLICTS OF INTEREST

The author(s) declare no conflicts of interest.

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BIOGRAPHY

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Reference According to APA Style, 7th edition:

Ho, A. G. (2024) Understanding Typical Emotions In The Design Process.
Convergências - Revista de Investigação e Ensino das Artes, VOL XVII (34), 25-39.
<https://doi.org/10.53681/c1514225187514391s.34.261>

Case Report

DOI: 10.53681/c1514225187514391s.34.249

REINTERPRETANDO TRADIÇÕES: O PROJETO NEVE INSULAR E A CRIATIVIDADE NO TECIDO CULTURAL DE CABO VERDE

Reinterpreting Traditions: The NEVE INSULAR Project and Creativity in the Cultural Fabric of Cape Verde

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RESUMO

Este estudo explora o projeto NEVE INSULAR como um caso de estudo para entender como as práticas relacionais de arte e design podem fomentar a criatividade social e a sustentabilidade. O projeto desafia a dicotomia tradicional entre inovação e tradição, a qual, historicamente, tem promovido uma visão atomista do indivíduo e contribuído para a exploração da natureza e das culturas. O projeto NEVE INSULAR é analisado no contexto da narrativa histórica ocidental, onde a modernidade é muitas vezes vista como um avanço linear em detrimento das tradições. Esta pesquisa argumenta que mudança e inovação não implicam necessariamente a superação do tradicional pelo moderno, mas que ambos podem coexistir e enriquecer o património cultural material e imaterial. A abordagem adotada envolveu uma análise qualitativa detalhada do projeto NEVE INSULAR, considerando suas práticas, estratégias e a interação entre os participantes. Foram examinados também projetos similares e literatura relevante para comparar e contrastar as abordagens e impactos no campo da arte e design colaborativos. O estudo revelou que o projeto NEVE INSULAR contribui significativamente para a sustentabilidade e criatividade social, oferecendo uma alternativa à visão tradicional de modernidade. Ele demonstra como a arte e o design podem ser utilizados para criar um diálogo enriquecedor entre o moderno e o tradicional, promovendo a sustentabilidade cultural, social e ambiental.

PALAVRAS-CHAVE

criatividade social; práticas colaborativas; Cabo Verde; algodão; sustentabilidade.

ABSTRACT

Taking the Insular Snow project as a case study, I intend to show how relational art and design practices can contribute to social creativity and sustainability in the way that they run counter to the innovation/tradition dichotomy. A product of the Western historical narrative, the tradition/innovation dichotomy equates Western modernity as the universal telos and, concomitantly, everything that resists its conversion - the different knowledges or cultures - as "non-modern", "traditional". Within this narrative, the "modern" is conceived as the acceleration of change and the advancement in time through it, and the "traditional" as the static, fixed in time. In this context, the tradition/innovation dichotomy fosters an atomistic view of the individual context, separate from nature and the cultural context, contributing to the naturalization of social differences and an anthropocentric view of the world, and thus being at the heart of the exploitation of people and nature. I argue here that change and innovation do not imply the overcoming of the traditional by the modern but that, on the contrary, both constitute a flow that feeds the tangible and intangible cultural heritage as part of a political process of reinterpretation and creation of historical meaning.

KEYWORDS

social creativity; collaborative practices; Cape Vert; cotton; sustainability.

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Submission date:

05/11/2023

Acceptance date:

03/09/2024

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Castelo Branco.
Convergências: Volume 17 (34)
30 novembro, 2024

1. INTRODUÇÃO

No contexto da modernidade, as práticas de arte e design têm experimentado uma evolução significativa, onde a dicotomia tradição/ inovação desempenha um papel central. Desde o virar do milénio, assistimos a um aumento expressivo de projetos sociais que incorporam práticas colaborativas, refletindo uma tendência global. Exemplar desta tendência é o projeto Living Form da Creative Time, que consiste num arquivo digital de 350 projetos sociais realizados entre 1991 e 2011, abrangendo uma diversidade de áreas e ilustrando a intersecção crescente entre arte e design. Projetos emblemáticos como “Mobile Homestead” de Mike Kelley, “Young New Yorkers” de Rachel G. Barnard, “DREAMER Kites” de Miguel Luciano e “Futuros IDs” de Gregory Sale destacam esta intersecção, oferecendo exemplos concretos de como a arte e o design podem ser utilizados para abordar questões sociais complexas e promover a transformação social.

Este artigo centra-se no projeto NEVE INSULAR, uma iniciativa da artista/investigadora Rita Rainho e da designer de moda Vanessa Monteiro. Surgido em resposta ao desafio da URDI - Feira do Artesanato e Design de Cabo Verde em 2018, o projeto propõe reinventar a panaria cabo-verdiana, um elemento-chave do património cultural imaterial de Cabo Verde, através de novos suportes e abordagens interdisciplinares. O projeto visa contribuir para uma sustentabilidade holística, integrando preocupações económicas, ecológicas, sociais e culturais. A sustentabilidade social, um pilar frequentemente negligenciado, é essencial para alcançar uma sustentabilidade mais abrangente. A Agenda da ONU para 2030 enfatiza a necessidade de padrões sustentáveis de produção e consumo, destacando a interconexão entre os setores económico, social e ambiental. Neste contexto, o projeto NEVE INSULAR adota uma abordagem holística, enfatizando a importância do fortalecimento do tecido social para enfrentar os desafios da sociedade contemporânea.

O projeto inicia-se com a figura estilizada da flor de algodão (capulho), um símbolo central nos padrões do *panú di téra*. Este início simbólico reflete não apenas o renascimento da panaria cabo-verdiana, mas também a integração de diferentes dimensões da sustentabilidade. Segundo Rita Rainho, o projeto transcende a criação autoral e o objeto de design, promovendo uma compreensão partilhada do passado e das heranças esquecidas, e abrindo caminho para um futuro sustentável do algodão insular. O título “NEVE INSULAR” simboliza metaforicamente a brancura do algodão com o contexto histórico do trabalho de plantação, representando a descolonização das mentes. Rainho destaca a importância de compreender o papel das plantações de algodão para os “monocultivos da mente”, uma metáfora para a supremacia ocidental reforçada pela mercantilização de objetos e pessoas.

O projeto desafia o individualismo nascido no Renascimento e perpetuado no Romantismo, refletindo-se numa noção linear do tempo, conduzida pela construção dicotómica de tradição e inovação. NEVE INSULAR ecoa o legado das práticas de arte participativa, exemplificado pelo projeto ‘Culture in Action’ de Chicago, que estabeleceu um precedente para o envolvimento comunitário e a mudança social na arte. No âmbito do design, teorias como o “Design for the Real World” de Papanek e a sustentabilidade social nas práticas de design de Manzini fornecem alicerce teórico para a abordagem do NEVE INSULAR. Os princípios de co-design, destacados por Sanders & Stappers, e a visão de design como ação social transformadora, defendida por Thorpe e Simon, alinham-se com a metodologia do projeto. A análise aqui apresentada prepara o terreno para explorar “A Hierarquia do Valor Global” e a “Criatividade Social”, contextualizando o projeto NEVE INSULAR no discurso mais amplo de arte, design e identidade cultural. Uma breve visão histórica do pano cabo-verdiano será também abordada, iluminando a sua importância.

2. BREVE HISTÓRIA DA PANARIA CABO-VERDIANA

O arquipélago de Cabo Verde está localizado no Atlântico Norte, a cerca de 450 km da costa oeste africana, conforme descrito por Amarante (2012, p. 21), e é caracterizado por um clima saheliano. Com uma área territorial limitada (INE 2015) e aproximadamente meio milhão de habitantes, o arquipélago já era conhecido por vários navegadores antes de 1460, ano em que Portugal iniciou a colonização. Esta colonização foi marcada pela chegada de donatários e colonos portugueses, que estabeleceram a presença europeia e sustentaram a economia local por meio da mão-de-obra escrava, trazendo africanos de diversas etnias, principalmente da Guiné (Carreira, 1968, p. 21). Após séculos de colonização, Cabo Verde conquistou a independência em 1975 e estabeleceu um regime democrático, que se consolidou com as primeiras eleições pluripartidárias em 1991.

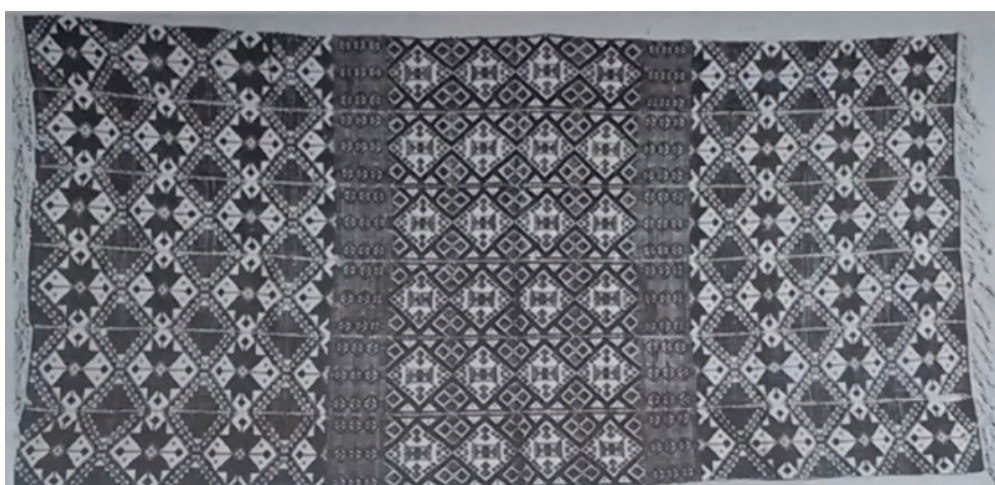


Fig. 1
Pano d'Obra bicho, 78x172cm,
Cabo Verde, Luis Pavão, 2018,
© DGPC.

Desde o início da colonização, a plantação de algodão foi incentivada pelo rei Afonso V, destacando a importância econômica e cultural do *panú di téra*. Este tecido, tecido a partir de fios de algodão e tingido tradicionalmente em azul-escuro com anil ou índigo, tornou-se uma mercadoria valiosa, usada até mesmo como moeda em certas épocas. Tecelões africanos, trazidos como pessoas escravizadas, introduziram técnicas de tecelagem que se misturaram com influências mouriscas e locais, resultando em um estilo único que reflete a diversidade cultural de Cabo Verde. Assim, a plantação do algodão em Cabo-Verde começou no final do séc. XV, sobretudo nas ilhas de Santiago e do Fogo e nos séc. XVII e XVIII na Ilha Brava, sendo que há notícias de produção espontânea de algodão no arquipélago desde finais do séc. XV (Carreira, 1983, p. 21). Os testemunhos mais antigos que se encontram da produção do *panú di téra* em Cabo Verde datam de 1517 (Carreira, 1983, p. 47).

O *panú di téra* não era apenas um produto econômico, mas também um veículo para o tráfico transatlântico de escravos, ligando Cabo Verde à Costa da Guiné e além. Com o tempo, este tecido assumiu um papel simbólico na resistência e formação da identidade nacional, especialmente após a independência. A revitalização da panaria cabo-verdiana, como parte do movimento de reafirmação, simbolizou uma reivindicação da identidade cultural e um desafio à narrativa colonial (...). No entanto, a produção de algodão enfrentou desafios significativos no século XIX, devido a secas e fomes, bem como a mudanças econômicas decorrentes da Revolução Industrial e do comércio global. A introdução do pano de algodão americano “paulino” marcou uma mudança na produção e no consumo de tecidos, impactando a tradição do *panú di téra*. Após a independência de Cabo Verde em 1975, o artesanato, incluindo a panaria cabo-verdiana, ganhou um papel central no movimento de reafirmação do país, impulsionado pelo PAIGC. Esta fase marcou um esforço deliberado para redefinir e fortalecer uma identidade nacional própria, distinta da herança colonial. Artistas influentes, como Luísa Queirós (1941-2017), Bela Duarte (1940-2023), Manuel Figueira (nasc. 1938)

e outros, contribuíram significativamente para este movimento, fundando a Cooperativa Resistência e, posteriormente, o CNA-Centro Nacional de Artesanato. A missão do CNA, que mais tarde se tornou o Centro Nacional de Arte, Artesanato e Design, foi documentar e revitalizar a tecelagem tradicional cabo-verdiana, promovendo iniciativas para preservar e rejuvenescer esta prática cultural.

Durante o período que se estendeu de 1975 até as primeiras eleições pluripartidárias em 1991, o *panú di téra* evoluiu de um mero artefato cultural para um símbolo poderoso da identidade e africanidade cabo-verdiana. Este tecido tornou-se um emblema da imaginação e resistência do povo cabo-verdiano contra a opressão colonial, reafirmando a riqueza da sua herança cultural. Com o crescimento do turismo e da imigração após 1991, no entanto, observou-se uma mudança no discurso cultural em Cabo Verde. A noção de criouldade, anteriormente usada para definir uma classe intermediária durante o colonialismo, passou a ser adotada pelas elites cabo-verdianas como uma forma de ascensão social e posicionamento no contexto global (...). Neste período, o *panú di téra* manteve seu status como um símbolo nacional, mas foi recontextualizado, transformando-se em uma forma de “branding” local que reflete tanto a herança cultural quanto a nova realidade socioeconômica de Cabo Verde. Esta reinterpretação do *panú di téra* ilustra como práticas tradicionais podem ser adaptadas e redefinidas em um mundo moderno, desafiando a dicotomia entre tradição e modernidade. A evolução do *panú di téra* desde um produto de um passado colonial até um ícone de criatividade e inovação local ressalta seu potencial como veículo para a sustentabilidade e a criatividade social. A evolução da panaria cabo-verdiana, portanto, não somente narra uma história de resistência e adaptação, mas também abre caminho para novas aplicações e interpretações no campo da arte e do design contemporâneo. Ao reconhecer e valorizar essas práticas, podemos explorar como a tradição e a modernidade podem coexistir e enriquecer o património cultural, abrindo novas possibilidades para estudos futuros e aplicações práticas em diferentes áreas.

3. NEVE INSULAR – RELAÇÕES DE CUIDADO

No contexto do projeto NEVE INSULAR, o *panú di téra*, além de representar a complexa história de Cabo Verde, serve como um ponto de partida para uma discussão mais ampla sobre sustentabilidade, educação e inovação cultural. Este projeto não apenas revisita a história do tecido, mas também explora novas formas de pensar e aplicar práticas tradicionais no mundo contemporâneo. Enquanto iniciativa artística, o projeto NEVE INSULAR, não está na produtividade no sentido convencional, mas sim na preservação do património cultural, na estimulação da criatividade social, na sensibilização para as questões ambientais e no fortalecimento dos laços comunitários e com a natureza. Este modelo, que integra arte, sustentabilidade e educação, pode servir como uma inspiração para abordagens semelhantes em outros contextos, adaptando-se às especificidades culturais e ambientais locais.

Tanto no séc. XIX, quando Marx descreveu as condições de pobreza e exploração no mundo da produção têxtil em *O Capitalismo*, como atualmente – como notam as autoras do projeto – o “algodão permanece no topo da produção escrava massificada e estratificada. Daí que o ciclo de algodão seja abordado também pelas promotoras deste projeto como uma metáfora da mentalidade extrativista dos recursos naturais e humanos cuja massificação, ao nível planetário, teve início no colonialismo acoplado à revolução tecnocientífica europeia: a biodiversidade implica, neste contexto, também uma biodiversidade mental, um sair para além dos trilhos caminhados.

Neste contexto, uma mudança social para uma maior sustentabilidade implica um redesign do sistema, quer ao nível material como imaginário, uma compreensão da “diversidade e o plantio do algodão como um regresso à terra enquanto implicação na reimaginação da história a partir de lutas que herdamos e que nos implicam no questionamento nos modos de pensar, educar e viver” (Rainho, 2021, p. 58). Assim, as autoras afastam-se “de um produzir artesanato & design pensado no turismo, na ótica do design da identidade nacional através do vestuário, e dos objetos com aplicações do *panú di téra*”. Rita Rainho e

Vanessa Monteiro focam-se sobretudo no processo a partir de três pilares, “a agroecologia, a educação e o campo artístico” (...), conscientes de que para “produzir de forma ecológica, sustentável e justa, é preciso criar uma rede solidária de sentido comum [que] só o tempo o pode construir” (Rainho, 2021, p. 59).

Apesar de a produção do algodão ter desaparecido do arquipélago, a sua utilização difundiu-se. Atualmente, para a produção, o fio de algodão tem de se importar da costa africana, do Gana, por exemplo. Ou seja, há um desperdício de recursos materiais e humanos na medida em que o desenvolvimento da produção de algodão poderia permitir uma fonte de sustento e evitar a poluição através dos combustíveis devido à compra de produtos longe do local de consumo.

Na Ilha de São Vicente não havia cultivo de algodão, apesar de hoje existir vegetação espontânea. Assim, o Projeto NEVE INSULAR começou de forma simbólica com uma plantação de algodão em parceria com a Associação Agropecuária do Calhau e Madeiral – que cedeu o terreno – realizada em conjunto com o público da exposição da NEVE INSULAR na URDI - Feira do Artesanato e do Design de Cabo Verde, sendo que os visitantes eram levados para o local da plantação em autocarros organizados pelo CNAD. No local da exposição, estavam expostas fotografias de arquivo cedidas pela Associação dos amigos da Natureza intervencionadas por Rita Rainho e Vanessa Monteiro: sobre uns plintos, umas pequenas caixas de pedra, realizadas pelo artesão Albertino Silva, continham sementes que as pessoas levavam para a sementeira do algodão.

Posteriormente, NEVE INSULAR ganhou autonomia e, com o apoio do CNAD, organizou em 2019 um conjunto de oficinas de agroecologia com os agricultores da Associação Agropecuária do Madeiral e Calhau, com a colaboração de algumas escolas e vários apoios [2], oficinas que tiveram participantes de diferentes gerações e reuniam aos sábados (Fig. 2). Para os agricultores foi útil tomarem conhecimento de outra forma de cultivo sem pesticidas, enquanto as crianças beneficiaram do conhecimento do ciclo do algodão e da sua história enquanto parte do património material e imaterial de Cabo Verde. As oficinas eram dedicadas à transformação do algodão, desde tirar a semente, descaroçar, cardar, até fiar. Foram também realizados workshops de cardar e fiar com o artesão Marcelino Santos e de tingimento natural com a designer brasileira Flávia Aranha, tendo sido as peças resultantes dessas oficinas expostas na exposição “Países espelhados” no SESC – Serviço Social do Comércio, São Paulo, que focou os intercâmbios culturais entre os países africanos lusófonos. Anualmente, fazem várias colheitas de algodão onde participam também pessoas de várias gerações e contextos, pessoas que vivem nas cidades e agricultores.

Mais recentemente, em Abril de 2021, foi realizada uma formação do ciclo do algodão, no



Fig. 2
Workshop realizado no âmbito do projeto NEVE INSULAR, 2019.

âmbito das ações “Fiando o algodão das novas gerações”, a qual contou com a participação do formador Marcelino dos Santos, das autoras de NEVE INSULAR e de oito formandos [3]. A formação teve a duração de um mês e passou por todo o ciclo do algodão desde a plantação até à tecelagem, no final os participantes partilharam a sua experiência com o público no Centro Cultural de Mindelo e foi apresentada a tapeçaria coletiva realizada, “Mon na cotton” (Fig. 4). São também realizadas formações dirigidas especificamente a mulheres no sentido de as emancipar. Entre junho e outubro de 2022 foi realizada, uma formação em agroecologia dirigida às mulheres do Vale do Calhau e Madeiral, Ilha de São Vicente, introduzindo os princípios da biodiversidade.

Para além de um espaço de formação, este projeto contempla também a realização de



Fig. 3
Colheita de 2021, no âmbito da visita de Ciclo de Algodão - curso de transformação de algodão. Imagem de NEVE INSULAR.

residências artísticas, reunindo artesãos e artistas. Em Agosto de 2021 foi realizada a residência artística *Rbera* que reuniu, para além das autoras do projeto, a designer têxtil senegalense Joana Bramble (nasc. 1976), um ceramista, Manú Soares (nasc. 1986), dois tecelões, Marcelino Santos (nasc. 1957) e Cândida Rocha e Rosilene Delgado que se dedica à transformação agroalimentar no Vale e que anteriormente tinha participado na formação em tecelagem. Nesta residência, a partir do mote da figura estilizada da flor de algodão (*capulho*) que servia, entre outros motivos, de padrão para o *panú di téra*, trabalharam o desenho e, com a participação do ceramista Manú Soares, realizaram loiças e moldes para queijo com a forma da flor de algodão, e food design com produtos existentes na Associação Agropecuária do Calhau e Madeiral. Verificou-se a existência de três teares: dois deles estiveram ligados com a mesma urdidura



Fig. 4
“Mon na Cotton”, tapeçaria coletiva, grupo Ciclo do Algodão-projeto NEVE INSULAR, 2021. Imagem de NEVE INSULAR.



Figs. 5 e 6
Residência artística Rbera, 2021.

de forma que iam aproximando-se à medida que avançavam na tecelagem (figs. 5 e 6). Esta partilha da urdidura, geralmente individual, simbolizou o princípio subjacente a esta residência: o conceito de conexão entre pessoas, matérias-primas e saberes. Conexão entre pessoas: habitantes da cidade e agricultores, sendo que, como sempre que há um evento do projeto, se vendem e promovem os produtos agroecológicos; entre matérias-primas: experimentaram-se várias matérias na tecelagem, como o carrapato, folha de bananeira, troncos, sisal, algodão e sementes; entre as pessoas e o território; e, por fim, entre saberes técnicos de vários domínios, de diferentes matérias-primas e sobre biodiversidade.

A ideia de desviar o foco do objeto para o processo é fundamentada por uma visão holística de economia circular como sistema de relações em que é necessário cultivar e cuidar das plantas à medida que elas crescem; como símbolo do cuidado, na apresentação final, foram mostradas as peças numa estrutura escultórica semelhante a um avental revestida com as bandas da tecelagem (Fig. 7).

No contexto do projeto NEVE INSULAR, o *panú di téra*, além de representar a complexa



Fig. 7
“Avental”, tecelagem escultórica coletiva, grupo da Residência Artística Rbera, 2022. Imagem de NEVE INSULAR.

história de Cabo Verde, serve como um ponto de partida para uma discussão mais ampla sobre sustentabilidade, educação e inovação cultural. Este projeto não apenas revisita a história do tecido, mas também explora novas formas de pensar e aplicar práticas tradicionais no mundo contemporâneo.

Enquanto iniciativa artística, o projeto NEVE INSULAR, não está na produtividade no sentido convencional, mas sim na preservação do património cultural, na estimulação da criatividade social, na sensibilização para as questões ambientais e no fortalecimento

dos laços comunitários e com a natureza. Este modelo, que integra arte, sustentabilidade e educação, pode servir como uma inspiração para abordagens semelhantes em outros contextos, adaptando-se às especificidades culturais e ambientais locais.

4. A HIERARQUIA DE VALOR GLOBAL

Uma das viragens de paradigma que as autoras do projeto procuram estimular é a da noção da hierarquia entre designer/artista e artesão para uma noção de partilha de saberes. Assim, durante o processo, tiveram a preocupação de contrariar “a tendência da separação daquele que concebe, tradicionalmente o/a designer, e o artesão/ã, daquele que executa, segregações e hierarquias herdadas desde o princípio da Revolução Industrial” (Rainho, 2021a, 92). Esta separação no relacionamento do designer, geralmente oriundo de contextos urbanos, com o artesão, como nota Murray “subscrever uma hierarquia que coloca ênfase na agência criativa do designer” (Murray, 2015, p. 226); a criatividade, entendida como produto de um indivíduo excecional, confirma a excecionalidade do designer e o facto de ser um designer quem tem ideias confirma a exclusividade das ideias a uma certa classe. Como vários autores analisaram (DeNicola & DeNicola, 2012; Wilkinson-Weber, 2004), a dicotomia tradição/ inovação é uma construção que divide, de um lado, os artesãos e, do outro, a classe média/alta europeia urbana, legitimando o que Herzfeld denominou de “hierarquia de valor global” na qual uma “increasingly homogeneous language of culture and ethics” (Herzfeld, 2004, p. 2) se tornou parte do *úbiqua*. O designer, geralmente, legitima a sua posição de poder enquanto intermediário entre os artesãos e as pessoas de classe média/alta à qual pertence (Wilkinson-Weber, pp. 79-98). Esta dicotomia faz parte de uma narrativa histórica ocidental que se representa a si mesma como moderna e, por oposição, todas os saberes não ocidentais são designados como “tradicionais” ou “antiquados”. Esta é uma narrativa histórica que postulou o *telos* universal da “modernidade”, transformando as hierarquias espaciais em hierarquias temporais. A oposição deixa de ser entre o “Sul” e o “Norte”, no sentido meramente geográfico, mas entre o “Norte” que está na ponta do tempo e o “Sul” entendido como o que está atrasado no tempo.

Nesta narrativa, todas as culturas não-ocidentais são consideradas como ainda-não-modernas ou subdesenvolvidas, relativamente a essa escala temporal linear. Concomitantemente, assistimos à globalização de um conceito de “moderno” que provém exclusivamente de uma específica região do globo, um fenómeno que Chakrabarty criticou, referindo-se a ele como o ato de retirar a Europa do seu contexto provincial (2000). A modernidade, neste contexto, é uma narrativa de mudança que, através da contínua rejeição do anteriormente existente, se vê a si mesma como o único agente dinâmico, isto é, aquilo que muda face ao que fez desaparecer, provocando uma aceleração vertiginosa do tempo. Assim, como nota Anttonen, “instead of traditions necessarily disappearing, that which disappears or falls out of use is named traditional” [4].

Neste projeto, o processo criativo decorreu através de uma colaboração horizontal: no caso da utilização da fibra de carrapato na tecelagem, por exemplo, a ideia surgiu de uma caminhada à nascente onde, no local onde pararam para trocar impressões estava um pé de carrapato como elemento escultórico. No dia seguinte, o artesão Marcelino Santos trouxe um instrumento para o desfiar.

A experiência desta residência relatada pela designer foi de que as práticas de arte e design resultaram no deixar fluir a matéria-prima, tendo os participantes sentido que, no final, é a matéria-prima que se impõe e que vence o ego individualista que pretende “enformar” a matéria (Flusser, 2010 [1993]).

Apesar da autoria do Projeto NEVE INSULAR ser das duas designers, Rita Rainho e Vanessa Monteiro, existem momentos nas várias etapas do projeto em que, como nesta residência, as peças resultaram de um processo colaborativo horizontal em que a autoria é partilhada.

5. CRIATIVIDADE SOCIAL

Podemos considerar que a colaboração horizontal, neste caso, estimulou a criatividade social a qual contraria o individualismo subjacente à noção de autoria individual. Mas, o que é a criatividade social e em que medida se distingue da criatividade individual?

Até aos anos 80, os estudos sobre a criatividade centravam-se sobretudo no indivíduo e na sua psicologia, estudando as suas disposições, personalidade, etc. Nessa década, estudos sobre o contexto para além do indivíduo – como a teoria do sistema de Csikszentmihaly (1999) – e autores como Montuori e Purser (1995) criticaram a visão de criatividade ligada ao mito do génio eremita, defendendo a noção relacional da criatividade, ligada ao contexto (Montuori e Purser, 1995). Estes estudos apelavam para uma integração multidisciplinar e para o estudo de áreas anteriormente não consideradas como relações criativas ou grupos criativos, contextos que proporcionam a criatividade, etc. A noção de criatividade ligada ao contexto social começou a surgir em livros como *Criatividade Social* (Montuori & Purser, 1991), que reúne textos de filósofos, antropólogos e teóricos de sistema, entre outros, ou no conceito de “criatividade distribuída” (Glăveanu, 2016), o qual foca, sobretudo, as relações entre os indivíduos partindo do princípio de que “culture is not an isolated factor that can be easily grouped under the general label of ‘environment’ but a condition of possibility for creativity” [5] (Glăveanu, 2016, p. 3). A raiz da clivagem entre esta abordagem da criatividade e a atomista é a sua crítica à visão tradicional do indivíduo como entidade separada do contexto cultural e da natureza: os dois são inseparáveis, não sendo possível distinguir onde começa e onde acaba cada um - são um fluxo.

A noção de criatividade entendida como fruto de um indivíduo muito especial e único nasceu no Renascimento, simultaneamente à noção do génio artístico. Esta visão atomista do indivíduo tornou-se ubíqua e está na raiz do capitalismo e da mentalidade extrativista da exploração da natureza. É um mito porque considera a cultura e a ambiente como “produtos” inertes do indivíduo que evoluem através da sua acumulação. Ora, vários indivíduos ou configurações de indivíduos/matérias-primas são mais do que a soma da sua acumulação individual. A criatividade não nasce só de uma pessoa, flui da colaboração entre pessoas: para um artista conceber uma obra de arte, por exemplo, é necessária a existência do conceito de “arte” – que levou gerações a constituir-se - de galerias ou mecenas, e de público recetor. Por outro lado, o artista também se alimenta de outras obras de arte: tudo flui da colaboração entre pessoas, instituições e elementos da natureza.

Este foi o caso desta residência artística: tudo decorreu segundo um processo muito orgânico, nada tendo sido estipulado, deixando fluir. Assim, a conexão não era apenas entre as pessoas, mas, também, entre diferentes materiais naturalmente acessíveis. Estas práticas podem ser consideradas como práticas de design no sentido em que estas são sempre, essencialmente, como Herbert Simon definiu, “courses of action aimed at changing existing situations into preferred ones” [6] (1969) mas focam relações recíprocas entre as pessoas e entre estas e o lugar, entendendo aqui este último como o entrelaçamento da paisagem geográfica e cultural. Neste contexto a criatividade não é entendida como originada por um indivíduo – ponto zero de uma linha temporal de eventos marcados pela rejeição do anterior - mas nasce de uma complexa rede de interações na qual a matéria-prima, a natureza e a herança cultural têm um papel tão ativo como as pessoas. A visão holística do ser humano e da natureza é essencial para contrariar o individualismo que opõe o homem - branco, classe média, ocidental, heterossexual - à natureza vista como matéria inerte, mero recurso amorfo, passivo e sem agenciamento. O reconhecimento do agenciamento da natureza e dos seres vivos e inanimados, não como unidades atomistas mas como configurações interdependentes entre si que formam um conjunto maior – a que Latour denomina Gaia (2015) – vai ao arripio da visão antropocêntrica do mundo subjacente à mentalidade extrativista na natureza.

Assim, o projeto NEVE INSULAR é também um projeto artístico no sentido em que o processo – isto é, as interações entre as pessoas, instituições, matéria-prima e saberes tradicionais – é considerado obra de arte em si: desencadeado pelas autoras, estas abdicam parcialmente do

controle autocrático da produção, proporcionando situações que favorecem a criatividade social tendo em vista a sustentabilidade e como orientação básica o sistema holístico, desde a produção do algodão, até à sua utilização, troca e consumo. Nesta conceção holística são integrados os fatores socioculturais, ecológicos e económicos. As técnicas tradicionais de tecelagem tingimento e transformação do algodão tornam-se numa forma de partilha de saber e troca de respeito mútuo entre pessoas que, geralmente, não se relacionam. Nesta conjuntura, estas práticas expandidas de arte e design são políticas na medida em que operam uma diferente partilha do sensível – entendido aqui, no sentido de Rancière (2000) como o que é percebido pelos sentidos – não considerando o indivíduo como soberano e único ser dotado de agenciamento mas aceitando, também, o agenciamento dos elementos da natureza e da criatividade social através de um processo de colaboração horizontal.

6. CONSIDERAÇÕES FINAIS

Na conclusão deste estudo sobre o projeto NEVE INSULAR, destacamos a abordagem sistémica e holística à sustentabilidade que se centra na renovação do património cultural cabo-verdiano, tanto material quanto imaterial. Este enfoque amplia o âmbito da arte e do design para além da mera criação de produtos, promovendo sistemas que encorajam a mudança de paradigma em direção a uma sustentabilidade integrada e reinterpretam criativamente o legado cultural relacionado com o ciclo do algodão e o *panú di téra*.

A especificidade do contexto de Cabo Verde, embora ofereça ensinamentos valiosos, pode limitar a aplicabilidade direta das estratégias do projeto em diferentes ambientes culturais, sublinhando a necessidade de adaptabilidade e flexibilidade nas práticas de arte e design sustentáveis. Ao transformar “competências técnicas em experiências sociais”, como articulado por Sennett (2012, p. 63), O projeto NEVE INSULAR, promove uma rede de sustentabilidade em múltiplas dimensões, criando produtos que mesclam tradição e inovação. Embora estas práticas contribuam para a criatividade social ao questionar a divisão convencional entre inovação e tradição, e ao procurarem reequilibrar a hierarquia de poder global, enfrentam desafios, como questões sobre o impacto a longo prazo e a mensuração dos resultados concretos. O projeto NEVE INSULAR, ao enfatizar o processo e a experiência coletiva, pode deixar em aberto questões sobre o impacto a longo prazo e a mensuração dos resultados concretos. Esta abordagem, centrada na criatividade social e no questionamento das divisões convencionais entre inovação e tradição, bem como na procura por um reequilíbrio da hierarquia de poder global, valoriza a contribuição coletiva e a experiência vivida. No entanto, essa ênfase na experiência coletiva e no processo, apesar de enriquecer o projeto, pode tornar menos tangíveis os métodos de avaliação do seu impacto e eficácia.

A abordagem holística e poética do NEVE INSULAR à sustentabilidade, embora não vise solucionar todos os desafios associados ao ciclo do *panú di téra*, estimula comportamentos cívicos e éticos ambientais. Esta orientação está alinhada com os princípios de desenvolvimento sustentável, conforme definido por Brundtland, que busca “atender às necessidades da geração presente sem comprometer a capacidade das gerações futuras de satisfazerem as suas próprias necessidades” (1987, p. 47). Antevendo perspetivas futuras, o projeto NEVE INSULAR apresenta um modelo que pode ser adaptado e replicado em outras comunidades e contextos, promovendo práticas sustentáveis e criativas. A replicabilidade e expansão do modelo, contudo, requerem uma abordagem sensível às dinâmicas culturais e sociais específicas de cada comunidade. A possibilidade de expansão e colaborações futuras, tanto local quanto internacionalmente, abre portas para aprofundar e expandir os impactos na sustentabilidade e inovação cultural.

Resumindo, o projeto NEVE INSULAR, com suas práticas inovadoras, oferece novas maneiras de interagir com o mundo, enfatizando a adaptabilidade e as estratégias específicas do contexto. Ao questionar as fronteiras convencionais entre tradição e inovação, o projeto infunde novos significados políticos e simbólicos no património cultural do *panú di téra* cabo-verdiano, libertando a imaginação para configurar constelações de relações mais sustentáveis entre os seres humanos e a natureza.

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NOTAS

[1] Entrevista realizada a 02.20.2019, Mindelo, Cape Verde.

[2] Apoio do Instituto Camões, do Ministério da Agricultura, consultoria das ONGs Estudos Inter-agricultura CERAI e Amigos da Natureza.

[3] Financiado por DIVERSIDADE - instrumento de Subvenção do PROCULTURA PALOP-TL, projeto financiado pela União Europeia, gerido e cofinanciado pelo Instituto Camões, IP em parceria com a EUNIC].

[4] “Em vez de as tradições desaparecerem necessariamente, aquilo que desaparece ou cai em desuso é nomeado como tradicional.” [Tradução livre].

[5] “A cultura não é um fator isolado que pode ser facilmente agrupado sob o rótulo geral de ‘ambiente’, mas sim uma condição de possibilidade para a criatividade.” [Tradução livre].

[6] “Cursos de ação destinados a mudar situações existentes para outras preferidas.” [Tradução livre].

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Reference According to APA Style, 7th edition:

Nolasco, A. (2024) Reinterpretando Tradições: O Projeto NEVE INSULAR e a Criatividade no Tecido Cultural de Cabo Verde. *Convergências - Revista de Investigação e Ensino das Artes*, VOL XVII (34), 41-52. <https://doi.org/10.53681/c1514225187514391s.34.249>

Case Report

DOI: 10.53681/c1514225187514391s.34.273

“DIFÍCIL É SENTÁ-LOS”: DESIGN PARA O PASSAGEIRO INFANTIL E JUVENIL DA TAP PORTUGAL (DÉCADAS DE 60 A 80

“The hardest part is sitting them”: design for the juvenile passengers of TAP Portugal (from 60’s to 80’s)

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RESUMO

A artificialidade da vida durante uma viagem de avião é compensada através do recurso a diversos procedimentos e objectos que, no caso de estudo apresentamos, tentam controlar a natural impaciência de uma criança. O nosso artigo seleccionou um conjunto de exemplares presentes a bordo dos aviões da TAP Portugal que considerámos emblemáticos do esforço para amenizar ou condicionar a sua atitude, preservando a sua convivência nesse espaço inescapável. O arco temporal compreendido entre as décadas de sessenta a oitenta pode considerado como o capítulo final de um serviço refinado entre as companhias aéreas, que se perdeu a partir da desregulação do mercado das rotas e tarifas aéreas generalizado a partir das décadas seguintes. Estes objectos, parecendo inócuos, possuíam a duplicidade funcional de entreter e simultaneamente prolongar a experiência e valores da marca TAP. O nosso artigo propõe-se resgatar a sua memória no discurso visual efêmero da História do Design em Portugal.

ABSTRACT

The artificiality of life during a plane journey is compensated using various procedures and objects that, in the present case-study, attempt to control a child's natural impatience. Our article selected a set of resources on-board TAP Portugal planes that we considered emblematic of the effort to soften or condition their attitude, preserving healthy coexistence in this inescapable space. The time span between the sixties and eighties can be considered as the final chapter of a refined service among airlines, lost in the following decades due to the deregulation of routes and airfares. These objects, appearing innocuous, had the functional duplicity of entertaining and simultaneously prolonging the experience and values of the TAP brand. Our article aims to rescue its memory in the ephemeral visual discourse of the History of Design in Portugal.

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História do Design, Crítica do Design, Cultura do Design, Aviação, TAP.

KEYWORDS

Design History, Design Criticism, Design Culture, Aviation, TAP.

Submission date:
30/03/2024

Acceptance date:
03/10/2024

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Castelo Branco.
Convergências: Volume 17 (34)
30 novembro, 2024

1. INTRODUÇÃO

O passageiro fecha os olhos. De um lado está sentada uma criança agitada, do outro uma pequena janela por onde se vêem as nuvens. Os pais da criança esforçam-se (ou não) por mantê-la “presa” à cadeira durante as 7 horas da viagem que se avizinha. Começa por ser difícil sentá-los e depois mantê-los sentados [1]. O enclausuramento e proximidade forçada do interior de um avião testa os limites da resistência humana E da sua convivência: o ambiente está montado. Todas as companhias aéreas se esforçam por amenizar o ambiente e proporcionar uma experiência e serviço memorável (no bom sentido). A TAP não foge à regra. Entre as décadas de sessenta a oitenta, ou seja, entre a “democratização” da viagem aérea junto da classe média e a desregulação ou liberalização do mercado que levou à drástica redução de custos, o serviço de bordo esteve povoado por uma série de objectos dedicados aos passageiros infantis e juvenis. Muitos deles desapareceram quer do interior dos aviões, quer da memória colectiva. A nostalgia da sua aparência e grafismo, associados às viagens realizadas em família nessa época, marcaram gerações de crianças, hoje adultos, quiçá colecionadores.

2. ESTADO DA ARTE E METODOLOGIAS

Seguimos uma linha de investigação na área da História e Crítica do Design, especificamente sobre os objectos e ambientes que povoaram o interior dos aviões da companhia aérea nacional TAP Portugal iniciada por Gentil-Homem (2014), que culminou na exposição retrospectiva TAP Portugal - Imagem de um Povo, Identidade e Design da Companhia Aérea Nacional realizada em 2015 no MUDE, Museu da Moda e do Design (Coutinho, 2015), e recorreremos igualmente a outros contributos parcelares como os de Belo (2019). Ou seja, procurámos resgatar e interpretar criticamente algumas soluções implementadas para resolver o problema a que aludimos na introdução. Não optámos por uma seriação exaustiva pois tratar-se-iam dezenas de objectos que redundariam nas mesmas conclusões, mas por uma amostragem diacrónica, selectiva (logo qualitativa) e sobretudo com maior potencial crítico. Muitos objectos efémeros foram (geralmente) desvalorizados ao longo da História da Cultura Material, e por inerência da História do Design. O colecionismo proporcionou-nos o seu resgate, permitiu-nos estudá-los e valorizá-los no quadro dos contributos aparentemente menos tangíveis, evitando os objectos gourmet crismados por Fallan (2010), ou seja, valorizando não apenas os grandes momentos da História, mas todos os momentos e objectos, mesmo os mal sucedidos ou de (aparentemente) menor importância. A historiografia deve consubstanciar o discurso como um todo e não como somatório de momentos eleitos. José Mattoso alertou-nos que a História “Tem uma dinâmica própria, uma dimensão total, e é essa totalidade que o historiador tenta descobrir ao procurar o sentido das coisas” (Mattoso, 2020, p.33). No caso do nosso artigo falamos de objectos menos estudados pela sua suposta menoridade: jogos, passatempos, livros de colorir, etc. que nos recordam uma época da História da Aviação Comercial e da TAP em particular. Seguimos, portanto, uma análise empírica de base qualitativa e não intervencionista. A investigação para o nosso artigo estudou um espólio constituído pelo acervo do SDA / MTAP [2] e pela coleção pessoal do autor: ou seja, centrou-se na observação directa de objectos. Não é alheia a esta metodologia a consciência da importância da nostalgia que estes objectos evocam, nomeadamente aqueles associados às boas memórias de infância. O mesmo é dizer que estes se afiguram essenciais na construção de uma persona nas marcas. O potente fenómeno da nostalgia e do revivalismo das marcas (e da TAP em particular) despoleta, como nos recorda Carvalho de Almeida (2012), uma consciência histórica que recupera objectos valorizados em arquivos históricos, mas também alguns efémeros e perdidos em coleções privadas. A TAP na sequência da exposição realizada no MUDE criou uma estratégia de marketing que fez uso deste fenómeno introduzindo voos de reconstituição de

época que incluíram aviões pintados com o logótipo de 1954 a 1979, assistentes de bordo vestindo replicas dos uniformes de 1973 e de give aways que voltaram a ser fabricados. Por fim procurou-se fundamentar algum conhecimento interdisciplinar fora da nossa área de especialização, sobretudo quanto aos fenómenos das áreas da Psicologia Comportamental em crianças como os contributos de Neophytou et. al. (2019).

3. DESENVOLVIMENTO

A impermanência do passageiro infantil e juvenil, cujo comportamento aludimos no título do presente artigo, é incontornável. Ela inclui factores endógenos e exógenos ao próprio indivíduo na relação com o ambiente que o rodeia. Ou seja, o grau de impermanência varia. Quando se torna imperativo controlar a sua actividade e subjugar a sua liberdade física, todos os esforços são insuficientes. E, no entanto, pretende-se que “non si muova” [3]. O arco temporal que abarcamos percorre demasiadas gerações e contextos socioculturais para que possamos definir com exactidão o que consideramos como passageiro infantil e juvenil. O infantil na década de sessenta seria juvenil na década de setenta e adulto na de oitenta. Assim sem delimitar quantitativamente que idades engloba, preferimos partir do pensamento e comportamento complexo daquilo que em linguagem coloquial (embora pouco científica) se atribui a uma criança ou juvenil. Assim foi desde a génese da aviação comercial em que se distribuíram jogos de cartas para ajudar a passar tempo e para desviar a atenção da vista exterior que os poderia assustar. Também não é o nosso propósito explorar o campo psicológico individual ou de grupo exaustivamente, mas tão só estabelecer uma relação entre as soluções que foram adoptadas para “sossegar” ou “apaziguar” as crianças a bordo de um avião. Pretendemos, contudo, interpretar os factores que induzem estímulos à sua maior ou menor impermanência, i.e. factores exógenos simples de operacionalizar. Certamente há 60 anos uma criança se comportaria de modo diverso de hoje. A noção de disciplina era valorizada e transmitida por via parental e/ou social de um modo exarcebado em relação actualidade, mas naturalmente o contexto era muito diferente. Actualmente, segundo (Neophytou et. al., 2019) as crianças são afectadas por crescentes fenómenos de (híper) actividade dada a exposição excessiva à profusão de estímulos sensoriais, sobretudo através das novas tecnologias. O índice de hiperactividade, traduzido em comportamentos de impermanência e desconcentração, tem vindo a aumentar à medida que o contacto das crianças com jogos de computador híper-estimulantes ocupa maior número de horas diárias. Actualmente os objectos de entretenimento abordo foram desmaterializados e transferidos para as telas de in-flight entertainment (IFE) [4] instaladas em cada assento. Também neste ambiente os conteúdos são criteriosamente seleccionados, não só para crianças como para adultos (Maeder, 2021). Esta ponte com a actualidade desvia-nos (brevemente) do arco temporal do artigo, visando estabelecer uma distinção tipológica entre passatempos de “dispersão” e de “concentração”, de acordo com os seus efeitos: um jogo de computador é quase sempre um entretenimento de “dispersão” e um puzzle ou livro de colorir de “concentração”. Este facto pode interferir na função principal do objecto, e inclusive adulterar os resultados esperados de apaziguamento, ou acalmia.

Antes de qualquer passatempo lhe ser entregue começemos por lembrar que algumas crianças entram sozinhas ao avião como “UMs” [5], ou seja aos cuidados da tripulação de cabina (Fig. 1). Essas carecem de maior dedicação sendo identificadas através de bolsas em vinil contendo o nome e destino. Naturalmente necessitam de maior entretenimento do que as que viajam junto com os pais, contudo os objectos ao seu dispor pouco diferem dos oferecidos aos passageiros regulares.

**Fig. 1**

Modelo Bolsa TAP em vinil para identificação de menores não acompanhados (década de 80).
Colecção do autor.

O modo para captar a atenção das crianças e mantê-las concentradas e ocupadas centrou-se à época na distribuição de passatempos e jogos didácticos. Os livros e lápis de cor foram quase obrigatórios ao longo de várias décadas (Figs. 2 e 3). Apesar da qualidade muito duvidosa da grafite, o logótipo da companhia de aviação neles gravado, foi usado e exibido orgulhosamente junto dos colegas de escola ou grupo de amigos, como objecto de status (Baudrillard, 1995), confirmando o seu “baptismo do ar”. Embora em processo de redução de tarifas, devido ao aumento da lotação dos aviões a jacto, a viagem aérea, sobretudo em Portugal, ainda tinha preços elevados para a classe média. Portanto, ainda poucos o faziam. Confirmando esse status foram igualmente distribuídos “diários de bordo” ou “diários de voo”, nos quais se podia registar a data, a rota e o tipo de avião, autenticados com a assinatura do comandante (Fig. 4).

**Figs. 2 e 3**

(Esq.) Livro para colorir TAP
(década de 80).
Colecção do autor.
(Dir.) Duas caixas de lápis TAP
(década de 80).
Colecção do autor.





Fig. 4
Diário de voo TAP (s/d).
Colecção do autor.

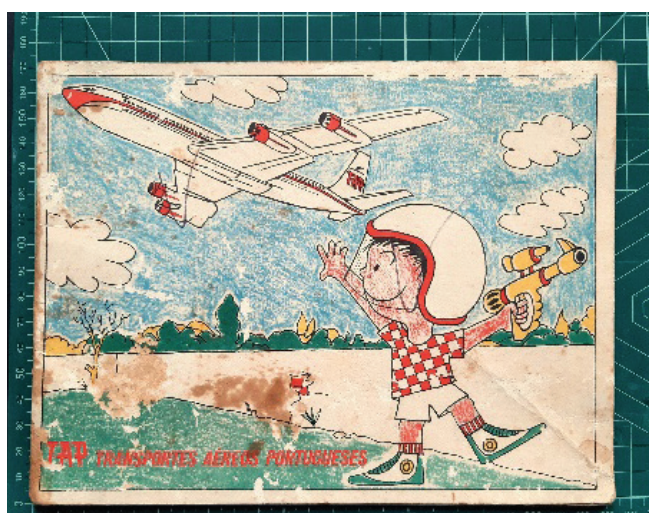


Fig. 5
Livro para colorir TAP (meados da década de sessenta) ilustrado por Quito.
Colecção do autor.

As companhias de bandeira produziram uma miríada de “give away” [6]. Quem, em criança viajou na TAP, durante as décadas de sessenta e setenta, certamente recordará os livros para colorir com ilustrações de Quito [7] ou Kleeger [8]. Tendo a companhia recebido o primeiro Boeing 707 em 1965 podemos datar o exemplar da (Fig. 5) como pertencendo à segunda metade da década de sessenta. Na capa uma criança empunha uma “pistola espacial” de brincar. Também o capacete com viseira e as sapatilhas tipo basquetebol compõem o “espírito do tempo”. Fica clara a associação da TAP à ideia de modernidade e contemporaneidade. A sequência de ilustrações no interior alude aos pioneiros da aviação, associando-a a uma série de marcos da história da aviação: “passarola” de Bartolomeu de Gusmão (1685 – 1724); balão dos irmãos Joseph-Michel Montgolfier (1740 - 1810) e Jacques-Étienne Montgolfier (1745 – 1799) com os primeiros aeronautas Pilâtre de Rozier (1754-1785) e o Marquês de Arlande (1742 - 1809); o voo dos irmãos Wilbur Wright (1867 - 1912) e Orville Wright (1871 - 1948) e por fim, numa alusão ao primeiro avião da TAP, o sobrevoos de um Douglas Dakota.

O segundo modelo de livro para colorir (Fig. 6) exhibe na capa uma composição ilustrada com um elemento sobejamente utilizado no marketing da companhia a partir de 1972, auxiliando-nos igualmente a datação. Nela figura o desenho de um Boeing 747 Jumbo num plano contra-plongé inserido numa paisagem idealizada de um casario tipo Algarvio, com açoteias e chaminés. No interior a sequência de ilustrações prolonga a temática do exemplar anterior: Nau alusiva aos Descobrimentos; planador de Otto Lilienthal (1848-1896); “passarola” de Bartolomeu de Gusmão (1685 - 1724); dirigível semelhante aos de Jean-Pierre Blanchard (1753- 1809) ou Henri Giffard (1825-1882) e ainda o Fairey de Gago Coutinho

(1869 – 1959) e Sacadura Cabral (1881 – 1924). Esta associação entre os grandes feitos da história da aviação e os grandes “marcos” da história da TAP permaneceu ao longo do tempo. Num exemplar da década de oitenta permanece a inevitável “Passarola” e o avião de Gago Coutinho e Sacadura Cabral, muito comum não só no material promocional da empresa, mas em todos os aspectos relacionados com a exaltação da aviação nacional” (Gentil-Homem, 2018, p.31).



Fig. 6
Livro para colorir TAP
(início da década de setenta).
Colecção do autor.



Fig. 7
Prancheta de desenho “Magic
Board” (década de oitenta).
Colecção do autor

Na década de oitenta os livros para colorir encontraram substituto sob a forma de uma pequena prancheta de desenho reutilizável, denominada “Magic Board” (Fig. 7). Reproduzindo o formato das antigas ardósias escolares, permitia desenhar por meio de um estilete e apagar por deslizamento.

Os puzzles (ou quebra-cabeças) foram outro dos passatempos recorrentes, e em dois formatos distintos: tradicionais, com peças em cartão (Figs. 8 e 9) ou de plástico com peças deslizantes (Fig. 10). O reduzido número de peças e o tipo de ilustração denotam as crianças como destinatários. A natureza das ilustrações reflete a temática dos destinos à volta do mundo. A figura 8, com ilustração de autoria desconhecida, apresenta uma versão antropomorfizada (e sorridente) de um dos Boeing 747 Jumbo da TAP: em fundo os três continentes servidos pela companhia: América do Norte (Estátua da Liberdade, Empire State Building, Ponte de Brooklyn e Capitólio); Europa (paisagem idealizada, do tipo Costa Mediterrânica com veleiros e casario subindo ao longo da encosta) e África (selva e elefante). Arriscamos apontar a ilustração como tendo norte-americana pelo desequilíbrio entre o detalhe dos motivos locais e o modo estereotipado dado aos restantes continentes. O exemplar da figura 9, também de autoria desconhecida, mostra em primeiro plano o desenho de um Lockheed L1011 Tristar e em segundo o Fairey usado na primeira travessia aérea do Atlântico Sul por Coutinho e Cabral, ambos circum-navegando o planeta Terra. A questão historicista é transmitida novamente contrapondo o moderno jacto e o frágil biplano, reforçando a noção de progresso tecnológico atingido pela aviação portuguesa ao longo do Século XX.



Figs. 8 e 9
(Esq.) Puzzle em cartolina alusivo ao Boeing 747 da (década de setenta). Museu TAP.
(Dir.) Puzzle em cartolina alusivo ao Lockheed L1011 Tristar e ao Fairey (década de oitenta). Coleção do autor.

Os exemplares de puzzles em termoplástico com peças deslizantes (Fig. 10) apresentam ilustrações alinhadas com campanhas e estratégias de produtos TAP da primeira metade da década de setenta. No exemplar selecionado regressamos ao uso da ilustração do Jumbo presente no livro de colorir da figura 6 e em várias peças provenientes da campanha publicitária da AC&R de 1972 [9] (Gentil-Homem, 2023). Alguns destes jogos, à semelhança dos exemplares cartonados, enfatizaram a aquisição de novos modelos e funcionaram como extensão da experiência de marca TAP. A chegada de novos modelos de aeronave foi sempre potenciada pelas companhias como símbolo de desenvolvimento tecnológico e aumento de conforto. Um recurso presente em quase todos os passatempos das companhias aéreas mundiais como prolongamento da experiência de marca (Riskos, 2021, p.15).

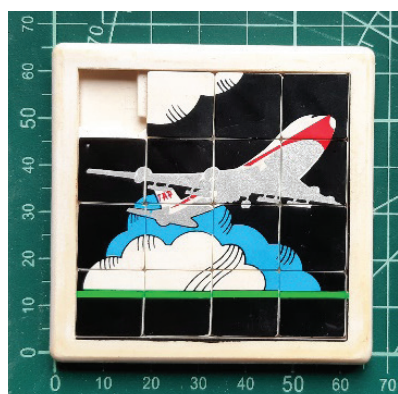


Fig. 10
Puzzle em plástico (inícios de setenta). Coleção do autor.

Selecione um objecto pela sua originalidade e destaque que alcançou durante a sua vida como giveaway. Ninguém que pertença à geração baby boomer terá esquecido os Kalkitos. Tratava-se de cartolinas com paisagens ou recriações de diversos ambientes que podiam ser personalizados através de figuras decalcadas. Muitos os terão coleccionado e ainda os possuirão algures guardados nos seus baús de recordações. Alguns, ou a maioria, desconhecem que a TAP também produziu e personalizou um destes Kalkitos, nunca comercializado, o qual apresenta o ambiente da placa do aeroporto de Lisboa com aviões da TAP Air Portugal (logo de 1979) (Fig. 11).



Fig. 11
Kalkitos customizado para a
TAP (década de oitenta).
Museu TAP.

Exceptuando os segmentos Business ou First Class, quase todos estes objectos desapareceram actualmente dos aviões. A lógica “econocrata” do low-cost imposta no actual período tardio do capitalismo de hiperconsumo, proscreveu-os como objectos inúteis e substituiu-os por soluções mais baratas de IFE.

[...] travellers are extremely price-focused and do not have the need to for ancillaries, apart from certain ancillaries such as luggage and meal. Instead, they rather pay for flight only (Tarja, L. 2015, p.51)

Para a História da Cultura Material nada ficará. A rápida obsolescência dos suportes informatizados não apela a colecionadores e não permitirá resgatar objectos convocando-os para contar as suas histórias, tal como acabámos de o fazer.

4. CONCLUSÃO

Os objectos compulsados permitiram, através de uma breve amostragem representativa (não exaustiva), ilustrar o tipo de serviço das companhias aéreas durante arco temporal abrangido. As décadas em questão refletem a democratização das viagens aéreas e a captação de uma classe média que a usufruiu não só para meio de transporte, mas também como símbolo de status. Capitalizando este fenómeno as companhias (e a TAP no nosso caso) cumpriram através destes objectos o duplo objectivo de proporcionar entretenimento e prolongar a experiência de marca junto de uma camada infanto-juvenil. Demonstrámos a importância do colecionismo e da nostalgia na sua preservação. O registo interpretativo e crítico de artefactos esquecidos da Cultura Popular nas sociedades contemporâneas, vive em grande parte da sua iniciativa. Alguns dos objectos apresentados cumpriram não só o dever de memória como resgataram do esquecimento e da caducidade momentos parcelares que completam a reconstrução do ambiente de uma parte menos conhecida do design que se praticou em Portugal. Uma das funções adicionais que poderá resultar deste efeito nostálgico foi recuperada e reintegrada nas estratégias de comunicação das companhias aéreas. Recuperar a experiência de marca em jovens a bordo dos aviões poderá voltar a constituir um factor distintivo para as companhias de aviação.

A História do Design em Portugal necessita que se resgatem e se preservem artefactos que nos permitam completar o quadro analítico da sociedade que os criou e do processo de design por trás da sua concepção. Estes não deverão ser os “importantes”, mas os existentes.

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NOTAS

[1] “Difícil é sentá-los, mas às vezes também é complicado mantê-los sentados” é uma expressão atribuída a Marçal Grilo, ministro da educação do XIII Governo Constitucional, aquando da polémica reforma do ensino básico e secundário de 2001 que introduziu aulas com duração de 90 minutos.

[2] SDA / MTAP, Serviço de Documentação e Arquivo / Museu TAP.

[3] Alusão à máxima de Galileu “e pur si muove!”, ou “e, no entanto, move-se” que afirmou perante a Inquisição em 1633, reiterando a sua convicção de que a terra se movia em torno do Sol.

[4] IFE In-flight entertainment ou Entretenimento a bordo.

[5] UM – unaccompanied minors, ou menores não acompanhados, compreende crianças entre os 5 e os 12 anos de idade que viajam entregues ao cuidado da tripulação de cabina.

[6] “Give away” expressão comumente utilizada no jargão da aviação civil para brindes ou ofertas a bordo.

[7] Desconhecemos mais informações sobre quem era, ou assinava Quito.

[8] Atribuímos neste caso apenas a autoria do desenho do Jumbo e por afinidade estilística. Kleegeer foi responsável por várias ilustrações inseridas na campanha para a TAP (1972) enquanto ilustrador na agência de publicidade norte-americana AC&R. Embora tenhamos identificado e contactado por correio electrónico um autor chamado Burt Kleegeer, este afirmou não ser o mesmo autor Kleegeer desses trabalhos. O restante casario algarvio que o avião sobrevoa terá muito provavelmente sido adaptado em Portugal. Propomos que o desenho original de Kleegeer terá sido aquele que se pode observar na figura 10.

[9] Vide figura 6 supra.

BIOGRAFIA

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O interesse temático do autor parte da disseminação dos resultados obtidos durante a investigação doutoral em Design: Um contributo em diversos domínios do Design e áreas interdisciplinares de confluência entre a História e Crítica de Design em Portugal (foco genérico) e do Design para companhias aéreas em Portugal (foco específico). Publicou um artigo na Design Issues e artigos de fundo na Convergências.

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Case Report

DOI: 10.53681/c1514225187514391s.34.267

ESTUDIO DE CASO DEL USO DE VÍDEO 360 INMERSIVO PARA LA REPRESENTACIÓN Y DIVULGACIÓN DE LOS PROCEDIMIENTOS EN UN TALLER DE IMPRESIÓN TIPOGRÁFICA

Case study of the use of immersive 360 video for the representation and dissemination of procedures in a letterpress workshop



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RESUMEN

La tecnología audiovisual e inmersiva ha evolucionado de manera considerable y espectacular en los últimos años. Esto ha posibilitado el desarrollo de contenidos educativos y divulgativos con una mayor capacidad de interacción con el espectador/usuario, así como un mayor grado de inmersión. Los avances han contribuido a incrementar la capacidad de representación del espacio donde se producen los eventos y a profundizar en diferentes grados de realismo. El potencial expresivo de estos nuevos medios, como la tecnología de realidad virtual o el vídeo 360, han aumentado las posibilidades a nivel de creación de contenidos, especialmente para la formación y la enseñanza.

En este artículo, se presenta un estudio de caso de uso del vídeo 360 en los procesos de producción de composición e impresión tipográfica en el taller de la Familia Plómez, ubicado en Madrid. El estudio de caso sirve para establecer una serie de directrices y parámetros en lo referente a la enseñanza de disciplinas que tienen un elevado componente de producción artesanal y en el que las tecnologías de realidad virtual y el vídeo 360 posibilitan visualizar el conjunto del espacio y cómo se trabaja en él. El proceso de composición e impresión con tipos móviles ha sido filmado en vídeo 360, grabando todos los pasos fundamentales con el objetivo de conseguir abrir nuevas vías de divulgación de estas técnicas artesanales.

PALABRAS CLAVE

Impresión tipográfica; vídeo 360; tecnologías inmersivas; tipografía; enseñanza/aprendizaje.

ABSTRACT

Audiovisual and immersive technology has evolved considerably and spectacularly in recent years. This has made it possible to develop educational and informative content with a greater capacity for interaction with the viewer/user, as well as a greater degree of immersion. Advances have contributed to increase the capacity of representation of the space where events take place and to deepen different degrees of realism. The expressive potential of these new media, such as virtual reality technology or 360 video, has increased the possibilities for content creation, especially for training and education.

This article presents a case study of the use of 360 video in the production processes of typesetting and letterpress printing in the Plómez Family workshop, located in Madrid. The case study serves to establish a series of guidelines and parameters with regard to the teaching of disciplines that have a high component of artisan production and in which virtual reality technologies and 360 video make it possible to visualise the whole space and how work is done in it. The process of composition and printing with movable type has been filmed in 360 video, recording all the fundamental steps with the aim of opening up new ways of disseminating these craft techniques.

KEYWORDS

Letterpress; 360 video; immersive technologies; typography; teaching/learning.

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Submission date:
 01/02/2024

Acceptance date:
 14/06/2024

1. INTRODUCCIÓN

La rápida evolución de las tecnologías de la información y la comunicación en las últimas décadas ha posibilitado la aparición de una serie de medios que han propiciado un mayor grado de inmersión en el contenido y una mayor interacción con el usuario, superando así las acciones de un mero espectador pasivo. El vídeo 360 y la realidad virtual constituyen dos sistemas que se encuentran intrínsecamente relacionados y que en algunos casos se solapan manteniendo sus propias particularidades en aspectos narrativos o en cuestiones relacionadas con los diferentes grados de interacción con el entorno (Rubio-Tamayo et al. 2022). La realidad virtual cinematográfica, tal y como han descrito autores en la última década (Rothe et al., 2017, Dooley, 2021), ha tenido numerosas aplicaciones. En el contexto actual, constituye un proto-medio de carácter experimental en el que se presenta una enorme oportunidad para el diseño de contenidos y experiencias en numerosos ámbitos, fundamentalmente el divulgativo y el educativo. La investigación actual parte del diseño de materiales de carácter didáctico para su difusión en formato vídeo 360 o realidad virtual cinematográfica para el conocimiento de los procedimientos de trabajo de composición e impresión con tipos móviles de madera mediante técnicas artesanales, lo que posibilita conocer cómo eran esa clase de prácticas antaño. Este caso permite también el desarrollo de estándares y procedimientos para la creación de contenidos en estos novedosos formatos para la divulgación de otros conocimientos y disciplinas.

2. PROBLEMA

El caso que se plantea en este artículo parte de la cuestión relacionada con el empleo y las aplicaciones de la denominada realidad virtual cinematográfica (CVR) y el vídeo 360 para la divulgación de contenidos. Estos sistemas producen imágenes equirrectangulares, que son la representación plana de una vista esférica o de 360 grados. Si bien el medio ha tenido una presencia considerable desde mediados de la década pasada, el uso de imágenes equirrectangulares a modo de fotografía y vídeo lleva produciéndose desde hace mucho tiempo en ámbitos como la cartografía, que representa el globo terráqueo de forma plana. La llegada de dispositivos de realidad virtual, como los *head-mounted displays* (HMDs) en forma de cascos o gafas, ha propiciado un aumento de la calidad del medio favoreciendo sus propias características técnicas y narrativas. En los últimos años también han surgido dispositivos para la filmación de vídeo en 360 que han permitido el desarrollo de la realidad virtual cinematográfica (Mateer, 2017, Dooley, 2021) como una subcategoría de la realidad virtual. El desarrollo de contenidos en la CVR presenta sus propias características en los procesos de preproducción y postproducción y difieren de manera significativa de la realidad virtual interactiva y de los formatos de vídeo más tradicionales. También en la construcción narrativa de los relatos y el análisis del propio entorno que va a ser filmado. Además, se deben de tener en cuenta los componentes de la propia escena para el diseño de la narrativa (Taborda et al., 2022). Otro factor a valorar es el grado de libertad que en la CVR es de 3 grados (denominados técnicamente DoF – Degree of Freedom). Este factor indica fundamentalmente que el espectador/usuario va a visualizar el entorno virtual desde un punto fijo. A menos que haya un cambio de plano secuencia que se puede producir mediante técnicas de preproducción. Además, el espectador/usuario no puede desplazarse ni interactuar con el entorno, aunque sí puede mover la cabeza o girarse para adaptar el campo de visión dentro del entorno 360 filmado.

Este tipo de particularidades hacen que las producciones para vídeo 360 realizadas en el ámbito educativo sean más reducidas y se empleen para explicar y divulgar una cuestión o procedimiento concreto. No obstante, hay producciones creativas de gran interés en el ámbito del vídeo 360, como vídeos musicales o cortometrajes, así como experimentos de carácter artístico y contenidos publicitarios, entre otros muchos formatos.

Por tanto, se hace necesario desarrollar estándares y protocolos para la creación de contenidos educativos y divulgativos en video 360 y CVR aprovechando sus características particulares para transmitir la información de la manera más eficiente en base a la tecnología disponible.

3. ESTADO DEL ARTE Y REVISIÓN DE LA LITERATURA

La producción de vídeo 360 es un fenómeno relativamente reciente, asociado a la proliferación en el mercado de modelos de dispositivos que posibilitan esa modalidad de filmado (Dooley, 2021). Normalmente se trata de cámaras compuestas de dos o más lentes que filman el entorno componiendo una imagen equirectangular a modo de proyección del espacio desde un punto de visión único. Gracias a su popularización, las cámaras omnidireccionales se han hecho cada vez más asequibles y han posibilitado nuevas formas de narratividad. De este modo los usuarios pueden sentirse inmersos en las escenas y elegir libremente la dirección de su visualización con dispositivos HMDs que son también cada vez más accesibles al público (Rothe, Buschek, y Hußmann, 2019).

El estado del arte del contexto del vídeo 360 y la CVR parte de la base de que muchos de los estudios realizados en torno a ese medio aparecen a partir de la segunda mitad de la década de los 2010s. De forma simultánea los dispositivos han ido evolucionando y sus prestaciones se han ido haciendo más sofisticadas. Esto se suma a la capacidad de los equipos en la medida en que la postproducción es un factor determinante en el producto final y se pueden realizar productos de carácter híbrido en los que se integre tanto vídeo filmado como producciones en *motion graphics* u objetos 3D (Rubio-Tamayo et al., 2022). El vídeo 360 filmado se convierte en un formato en el que se pueden incluir, con sus particularidades, componentes específicos del propio lenguaje audiovisual. Por ejemplo, los gráficos computacionales bidimensionales o tridimensionales que facilitan la diversificación de las posibilidades narrativas y de representación de este tipo de contenidos.

A continuación, vamos a ver diferentes tipos de aproximaciones relacionadas con los estudios del vídeo 360 y la CVR y cómo se detallan los factores asociados a la producción de contenidos con diferentes finalidades en este tipo de medios.

3.1. El vídeo 360 o la realidad virtual cinemática (CVR) como categoría de medio

El desarrollo de contenidos en vídeo 360 y realidad virtual cinemática (CVR) presenta una serie de rasgos y características específicos en el proceso de preproducción, producción y postproducción. Autores como Rothe et al. (2019) realizan una clasificación de la realidad virtual cinemática en base a sus características y rasgos, en la medida en que intervienen factores cognitivos relevantes. De este modo, los autores analizan dimensiones como la sensorial (a través de la vista, el oído y, en ocasiones, el háptico), así como las dimensiones diegéticas y extradiegéticas, además del dentro y fuera de plano. Los componentes diegéticos ya son tratados por autores como Rothe et al. (2017) en investigaciones anteriores y son determinantes en la construcción narrativa de contenidos audiovisuales, específicamente en el tipo de contenidos que se tratan en la presente publicación.

Autores como Mateer (2017) también tratan la cuestión de la producción en el medio de la realidad virtual cinemática, abordando conceptos tales como “suspension of disbelief” o suspensión de incredulidad que se define como la cualidad de las obras por la que los artistas, realizadores y desarrolladores tienen la licencia de crear mundos con medios separados de la realidad. Este hecho facilita la suspensión de los parámetros de la lógica del funcionamiento del mundo real y la aceptación del usuario/espectador de estos elementos como parte de la diégesis. Otra idea importante sería la de “presence” o presencia que podemos explicar como la capacidad de un entorno inmersivo de hacer que el usuario/espectador sienta de manera inconsciente y naturalizada que se encuentra en ese espacio virtual. Cuanto más real le parezca la sensación de estar en ese entorno mayor será el grado de presencia en ese espacio.

Ambos conceptos se ponen en relación a través de “transportation theory” o teoría de la transportación que consiste en estar inmerso en una historia y se desconecta del mundo físico. Ross & Munt (2018), por su parte, hacen hincapié en la importancia del guion para este nuevo medio y destacan su aproximación a las artes visuales, tales como la fotografía o la pintura, en las que tienen igualmente un impacto significativo en la evolución de dicho medio. Otros estudios (Rothe & Hussmann, 2019) sugieren que la CVR inmersiva presenta también un potencial grado de interacción a través del direccionamiento a objetos o lugares específicos del espacio virtual en la producción audiovisual e inmersiva a través de lo que los autores denominarían “spaceline”. Este concepto determina la linealidad de la historia en función de los grados de libertad (DoF) del usuario/espectador.

Por su parte, autores como Durán-Fonseca et al. (2021) describen dentro del desarrollo de su modelo, los rasgos que diferencian una experiencia inmersiva en 6 grados de libertad (6doF) o en 3 grados de libertad (3doF) para posteriormente realizar una categorización taxonómica de las experiencias narrativas en el medio de la realidad virtual. Los niveles descritos por Durán-Fonseca et al. (2021) serían el nivel espacial, el nivel narrativo y el nivel interactivo, presentando la CVR un grado que tiene ciertas limitaciones (aunque se encuentre presente) dentro de cada uno de las tres categorías previamente descritas.

En lo referente al vídeo 360 como parte fundamental de la estructura del medio de la CVR, en los últimos años también se han ido desarrollando métricas de calidad de los vídeos en 360 (Tran et al., 2018), lo que ha contribuido al desarrollo de estándares y al perfeccionamiento del medio en lo referente a los aspectos técnicos y a los propios aspectos narrativos, así como en la retransmisión en directo vía streaming. Esto supone que es un medio en constante desarrollo.

3.2. Aplicaciones del vídeo 360 en la creación de contenidos divulgativos y educativos

La CVR y el vídeo 360 han sido en los últimos años objeto de aplicación en numerosos contextos, tanto aquellos referidos al ámbito del entretenimiento como al ámbito educativo y divulgativo. Si bien el entretenimiento ha contribuido a sentar gran parte de las bases de los formatos que a día de hoy se siguen investigando en el ámbito del vídeo 360, la parte en la que nos vamos a focalizar en el actual proyecto tiene que ver con las aplicaciones en la divulgación de contenidos y en el contexto educativo, debido a la praxis que luego se muestra en el caso en el propio proyecto.

Autores como Snelson y Hsu (2020) ponen precisamente el foco en la forma en que la investigación relacionada con la aplicación educativa del medio del vídeo 360 y la CVR presenta una serie de rasgos específicos, categorizando también las áreas en las que se aplican y teniendo como finalidad el desarrollo de un contenido cuya importancia radica en el carácter inmersivo de este. Estos autores identifican también la relevancia del factor de que el aprendizaje inmersivo es ameno, aunque existen diversos resultados relacionados con la efectividad del aprendizaje que indican que sigue siendo interesante continuar la investigación en este ámbito.

Otros autores como Wuebben et al. (2023) también ponen el foco en el potencial divulgativo del vídeo 360 en contraposición con otros formatos como el denominado vídeo convencional. Trata de establecer una serie de parámetros y directrices para el desarrollo de contenidos en este tipo de formatos audiovisuales e implícitamente relacionados con el carácter inmersivo del medio. Entre estas directrices se encuentran aspectos como la limitación de tiempo, debido precisamente al carácter inmersivo del vídeo 360 o la posición en la que se coloca el dispositivo de grabación para la composición de la escena. También se tienen en cuenta los elementos que podrían considerarse diagéticos, como son la escena y los personajes que aparecen (y que son o parte de la narrativa o de la propia ambientación) o extradiagéticos, como la música externa, la narración de la voz en off y los *motion graphics*.

Las aplicaciones del vídeo 360 en el ámbito educativo también son abordadas por autores como Roche et al. (2021) que ponen el foco en el desarrollo de contenidos en vídeo 360 y en los procedimientos de producción en la medida en que es un formato cada vez más

extendido y que la comunidad docente lleva años propiciando el empleo del vídeo para el contexto educativo, especialmente la formación de los propios docentes. A partir de un análisis SWOT, se destaca como una de sus fortalezas el carácter inmersivo del medio y la naturaleza a priori disruptiva que poco a poco se va consolidando y definiendo su lenguaje narrativo y sus normas. Otros autores como Kavanagh et al. (2016) también exploran previamente la aplicación de vídeo 360 en el ámbito educativo determinando las características que adopta y las particularidades de una clase filmada y posteriormente reproducida en dicho formato.

Rupp et al. (2016), por su parte, también miden los efectos de *immersiveness* o inmersividad en el contexto de la realidad virtual cinematográfica educativa en formato vídeo 360. Los autores barajan la hipótesis de que las características del dispositivo van a determinar el grado de inmersión, así como diversos factores debidos a la aceptación de los usuarios o el grado de novedad de la tecnología aplicada al formato. Y Yusof et al. (2019) describen también la tendencia existente en el ámbito educativo de implementación de realidad virtual y, por ende, CVR y vídeo 360, destacando las aplicaciones que presentan en diferentes ámbitos y los formatos en los que se estructura el medio para el desarrollo de contenidos educativos y relacionados, también, con la divulgación y la simulación en un entorno inmersivo.

Más recientemente, Shadiev et al. (2022) indican precisamente que el vídeo 360 y la CVR, si bien son medios interesantes, existe relativamente escasa literatura académica relacionada con la investigación en este medio y sus aplicaciones, incluidas las educativas y las divulgativas que se planean en este artículo. El estudio que realizan los autores se basa en cuatro pilares diferentes, que son las herramientas, las teorías previas, las metodologías empleadas y los hallazgos, estructurando una serie de directrices generales y orientaciones a los educadores e investigadores en dicha área, pero también a los desarrolladores de contenido en dicho contexto. Otros autores como Rosendahl & Wagner (2023) sintetizan esta idea a partir de revisión de literatura con técnicas de SLR (Revisión Sistemática de la Literatura), identificando tres ramas principales de aplicación, que serían: 1) la presentación y observación del contenido educativo, 2) la mediación inmersiva e interactiva entre la teoría y la práctica y 3) la reflexión tanto externa como interna. También identifican una serie de categorías de valor añadido en este medio, como son el incremento de la motivación y el interés en el aprendizaje y las experiencias de inmersión interactivas, entre otros factores que también han sido descritos y que coinciden con estudios previos que se tienen en cuenta en el contexto del desarrollo del contenido detallado a continuación.

4. DESARROLLO Y RESULTADO: GRABACIÓN EN VIDEO 360 EN EL TALLER DE FAMILIA PLÓMEZ

El actual proyecto tiene como parte de desarrollo práctico una serie de vídeos en formato vídeo 360 o CVR de carácter educativo y divulgativo sobre los procesos de composición e impresión tipográfica en el taller de producción artesanal de la Familia Plómez, situado en el barrio de La Latina en Madrid. Dentro de los objetivos de esta asociación cultural está la enseñanza y divulgación de técnicas de los procesos de producción artesanales con tipos móviles. Los vídeos se han realizado en colaboración con Aula FCCOM (la unidad de producción audiovisual de la Facultad de Comunicación de la Universidad Rey Juan Carlos) para los que se ha empleado una cámara 360 modelo Ricoh Theta V, consistente en dos lentes y con filmado estereoscópico. Posteriormente se han editado los videos en formato monoscópico de proyección equirectangular. Las dimensiones del vídeo para la postproducción es de 3840 x 1920 píxeles en una relación de aspecto 2:1. Estas dimensiones posibilitan generalmente una postproducción bastante sencilla en la que se pueden integrar varios componentes, como cabeceras o títulos de crédito, con un estilo similar que retrotrae a los procesos de producción con tipos móviles en madera.

El proceso de producción escogido para su documentación ha sido la composición e impresión con los tipos móviles de madera frente a los de plomo por ser de mayor tamaño y de mayor

capacidad expresiva en formatos grandes como los carteles. En el vídeo se explican las características de los procesos de producción y los diferentes tipos de máquinas existentes, así como la preparación del material para la impresión en papel y el entintado.

El vídeo ha sido titulado “Taller de Técnicas de Impresión con Tipos Móviles en Formato Vídeo 360” y ha sido dividido en 4 secciones fundamentales relacionadas con las diferentes partes del proceso de impresión con tipos móviles en madera más una introducción. Cada uno de los videos se cierra con unos títulos de crédito creados con los tipos empleados en el desarrollo del cartel presentado en el taller.

Las partes en las que se ha dividido el vídeo son las siguientes:

1. Intro: En esta sección se muestran las diferentes partes del taller en diversos cambios de posición de la cámara y con música post-rock vintage de fondo, de forma que se puede ver el proceso de forma resumida. Los 2 minutos y 18 segundos que dura el video permite contextualizar y ver de forma global todas las estancias del taller; chibaletes y máquinas de imprimir que se utilizan.



Fig. 1

Fotograma del Vídeo taller de Técnicas de Impresión con Tipos Móviles en Formato Vídeo 360. En él se muestra en un fotograma equirectangular encima de una máquina de impresión Fag, la composición de tipos en madera con la frase

Type, Print & Rock.

(Fuente: Gamonal

& Rubio-Tamayo, 2023).

2. Presentación Taller: en dos minutos se realiza una breve presentación de la asociación y de las actividades divulgativas y educativas que se llevan a cabo en el local y la historia de los tipos móviles y su funcionamiento antes de la digitalización de los procesos. El objetivo general planteado es la composición e impresión de un cartel.



Fig. 2

Fotograma del Vídeo taller de Técnicas de Impresión con Tipos Móviles en Formato Vídeo 360. En ésta aparece un plano general del taller con el presentador realizando tareas relacionadas con la preparación de los contenidos.

(Fuente: Gamonal

& Rubio-Tamayo, 2023).

3. Composición: Se explica cómo se componen los tipos móviles de madera, incluyendo terminología asociada y sus características. Esta es la parte del proceso más extensa y su video dura 12 minutos y medio. Para el mensaje “Type, Print & Rock” se ha seleccionado una tipografía de palo seco condensada de un tamaño de 16 cíceros. La composición con tipos de madera se hace al revés, es decir, se crea el texto de derecha a izquierda. Después se tiene que ajustar la forma tipográfica completando los espacios en blanco con material de imposición y regletas de tal forma que queda un bloque compacto y cerrado. A su vez, esta forma tipográfica tiene que alojarse en la máquina de imprimir y quedar fija para que no se mueva. De nuevo se cubren los huecos con imposiciones y se cierran con cuñas para que la composición quede inmovilizada.



Fig. 3
Fotograma del Video taller de Técnicas de Impresión con Tipos Móviles en Formato Video 360. Sección en la que se explica el proceso de composición en tipos de madera.
(Fuente: Gamonal & Rubio-Tamayo, 2023).

4. Entintado - Impresión: En este caso se explica en 8 minutos y 50 segundos cómo se aplica la tinta para la impresión y cómo se prepara la máquina de imprimir (en este caso un modelo FAG) para la impresión en papel. En primer lugar, se prepara la tinta sobre una superficie plana para que pueda ser tomada con un rodillo de caucho. Posteriormente con el rodillo entintamos las letras de forma manual cubriéndolas completamente. Una vez entintada la forma tipográfica, se coloca un pliego de papel en la máquina de imprimir y se realiza una prueba para ver si fuera necesario realizar algún ajuste. Si todo está correcto, se procede a iniciar la tirada de impresión teniendo en cuenta que se debe entintar cada vez que se imprime un ejemplar. Una vez terminado se limpia y se recoge el material.



Fig. 4
Fotograma del Video taller de Técnicas de Impresión con Tipos Móviles en Formato Video 360. Sección en la que se explica el proceso de impresión con tipos de madera en una máquina FAG.
(Fuente: Gamonal & Rubio-Tamayo, 2023).

Las características que se han tenido en cuenta para el filmado son las siguientes:

- Los cortes de plano-secuencia tienen que ser reducidos y no pueden ser bruscos, de manera que no produzcan un *discomfort* en el usuario/espectador. Por un lado, se han optimizado el número de planos que se emplean para el proceso y, por otro, el cambio de plano se realiza con un fundido a negro paulatino, evitando cambios bruscos. Esto último se realiza en la postproducción.
- La duración de los vídeos no puede ser demasiado larga y tiene que tener en cuenta su visualización con un dispositivo HMD o gafas de realidad virtual. Es, por tanto, relevante, optimizar la explicación del proceso de una forma similar a cómo se realiza en el vídeo convencional.
- La posición de la cámara en cada plano se ha escogido en base a tres factores fundamentales: que se pudiese visualizar el conjunto del espacio, que se pudiese visualizar la actividad que se realiza y que la posición del presentador se encuentre a una altura que no difiriese mucho de la altura de la cámara, para no crear desfases. De este modo, no se ha posicionado la cámara para rodar en el suelo o a mucha altura. Se ha optado por posicionar la cámara en espacios donde se pudiesen ver los procesos fundamentales: composición, entintado e impresión.
- En ocasiones se usa el plano lejano a modo de un plano recurso donde se pudiese ver desde una posición privilegiada el conjunto del espacio del taller de la Familia Plómez, ya que existen elementos, como los chibaletes o la decoración, que forman parte de la ambientación y diégesis del espacio.
- Se ha tratado de que la luz de cada sección sea homogénea, teniendo en cuenta que el espacio cuenta con iluminación natural y artificial.



Fig. 5

Fotograma del Vídeo taller de Técnicas de Impresión con Tipos Móviles en Formato Video 360.

Sección en la que se presenta el taller a partir de un plano general en el que se puede visualizar el conjunto del espacio.

(Fuente: Gamonal & Rubio-Tamayo, 2023).



Fig. 6
Fotograma del Vídeo taller de Técnicas de Impresión con Tipos Móviles en Formato Video 360. Títulos de crédito en 360, siguiendo el estilo de tipos móviles de madera y adaptado al formato de visualización en CVR.
(Fuente: Gamonal & Rubio-Tamayo, 2023).

5. DISCUSIÓN Y CONCLUSIONES

La categoría del vídeo 360 o CVR como un nuevo medio es un área de investigación que, en el ámbito de la comunicación, la divulgación de contenidos y la educación, tiene todavía el potencial de producir una considerable literatura académica de referencia. Del mismo modo, si hablamos del vídeo convencional en 2D podemos afirmar que es un medio que se encuentra en proceso constante de innovación con un lenguaje y una aproximación narrativa ya consolidadas desde sus inicios hace más de un siglo, pero que no ha parado de producir contenidos de carácter experimental y en el que se sigue produciendo una evolución del lenguaje y su dimensión narrativa. El vídeo 360, que presenta rasgos propios de la realidad virtual surgida de manera relativamente reciente, ha incorporado alguno de los parámetros de este medio que se encuentra todavía también en proceso de consolidación narrativa y de los niveles de interacción del usuario con el medio. Se están investigando la integración de más sentidos, además de la vista y el oído, a través de tecnología háptica que posibilita la dimensión táctil en la realidad virtual.

El hecho de que el vídeo 360 presente, por norma general, tres grados de libertad (3doF), facilita que este medio tome sus propias reglas específicas en lo que a producción de contenidos se refiere. Esto hace que se pueda constituir una nueva vía para la experimentación en formatos narrativos con fines divulgativos, educativos o enmarcados en el ámbito del ocio y el entretenimiento. Y, en este contexto, el punto en común que presentan tanto el vídeo convencional como la CVR es la ya mencionada *spaceline*, con divergencias en la complejidad narrativa. Y es que ambos medios presentan el mínimo común denominador de una secuencia de imágenes que reflejan una serie de acontecimientos en el tiempo, integrando, además, y de forma ineludible, el recurso del sonido. Desde el punto de vista didáctico, el vídeo 360 ofrece una experiencia inmersiva que puede enriquecer significativamente la enseñanza de disciplinas tradicionales como la impresión tipográfica. Estas son algunas de las ventajas que puede aportar a la enseñanza de la composición y la imprenta artesanal:

1. Accesibilidad mejorada: Los estudiantes pueden acceder a entornos de impresión tipográfica desde cualquier ubicación, eliminando las limitaciones geográficas y permitiendo una participación más amplia. Los vídeos 360 o experiencias de CVR pueden ofrecer recorridos virtuales por talleres de imprenta tradicional, permitiendo ver cómo se organizan desde diversas ubicaciones.
2. Experiencia práctica simulada: Posibilita la creación de experiencias simuladas interactivas. Los estudiantes pueden participar en simulaciones prácticas, manipulando virtualmente herramientas y equipos, lo que proporciona una

experiencia cercana a la realidad sin los riesgos asociados.

3. Enfoque en detalles sutiles: Capturar detalles sutiles, como texturas y detalles finos de la tipografía, contribuye a una apreciación más profunda de los aspectos estéticos y técnicos de la composición e impresión tipográfica. Permiten a los estudiantes observar detalles y procesos de impresión tipográfica desde todos los ángulos. Pueden acercarse virtualmente a las máquinas, explorar herramientas y examinar de cerca los productos impresos.

4. Simulaciones interactivas e inmersivas: Los estudiantes pueden participar en simulaciones interactivas, manipulando objetos y experimentando con herramientas, lo que facilita un aprendizaje práctico y activo. Ofrece un nivel de inmersión más profundo que los métodos de enseñanza tradicionales. Pueden sentirse como si estuvieran realmente presentes en un taller de imprenta artesanal, lo que mejora la comprensión y la conexión emocional con el entorno de aprendizaje.

5. Seguridad y entrenamiento: Los videos 360 pueden utilizarse para proporcionar entrenamiento en seguridad, destacando prácticas seguras y procedimientos correctos para el uso de maquinaria especializada.

6. Contextualización histórica: La capacidad de explorar talleres históricos a través de videos 360 ayuda a los estudiantes a comprender la evolución de la impresión tipográfica a lo largo del tiempo.

7. Colaboración remota: Facilita la colaboración entre alumnos/as y profesores/as, incluso en entornos de aprendizaje en línea, promoviendo la interacción y el intercambio de conocimientos. Esto es especialmente beneficioso en la educación a distancia. Permite la adaptación a diferentes niveles de habilidad y necesidades de los estudiantes. Pueden personalizar su experiencia de aprendizaje según su ritmo y profundidad de interacción, lo que promueve un aprendizaje más individualizado.

Integrar el video 360 o CVR en la enseñanza del actual *letterpress* puede enriquecer la experiencia educativa, brindando a los estudiantes una forma más inmersiva, interactiva y personalizada de aprender sobre esta disciplina tradicional. Proporciona un acceso más amplio, una comprensión más profunda y un aprendizaje y práctico solamente superado por la realidad.

ACKNOWLEDGEMENTS

La investigación llevada a cabo forma parte del proyecto “Nuevas narrativas interactivas e inmersivas para impulsar la Economía circular y la innovación social a través de la comunicación científica y la ciencia ciudadana desde la Escuela” eComciencia (PID2021-127019OB-I00), y a través de la Unidad la Unidad de Producción de Aula FCCOM URJC en el desarrollo y difusión del material didáctico (los autores)

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Reference According to APA Style, 7th edition:

Arroyo, R. G. & Tamayo, J. L. R. (2024) Estudio de caso del uso de vídeo 360 inmersivo para la representación y divulgación de los procedimientos en un taller de impresión tipográfica. *Convergências - Revista de Investigação e Ensino das Artes*, VOL XVII (34), 65-77. <https://doi.org/10.53681/c1514225187514391s.34.267>

Case Report

DOI: 10.53681/c1514225187514391s.34.269

CO-DESIGNING FASHION WITH AI IN THE PHYGITAL SCENARIO

Co-design de moda com IA no cenário phygital

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ABSTRACT

For several years, the fashion industry has been grappling with an exponential technological and digital transformation, revolutionising the way ideas are conceived, designed, produced, communicated and sold. Artificial intelligence, integrated in fashion design, gives rise to new scenarios and acts of cultural and social construction in which human creativity and technology merge into new co-creative and collaborative approaches. Through the analysis of two significant case studies, Robbie Barrat and Anna Yang, this contribution aims to investigate the methodologies and practices through which this emerging phenomenon modifies the fashion design process and the skills of the professionals involved. The analysis provides insight into the ways in which archives can be transformed into datasets and the process of human-technology collaboration in fashion design.

RESUMO

A indústria da moda tem lidado com uma transformação tecnológica e digital exponencial há vários anos, revolucionando a forma como as ideias são concebidas, projectadas, produzidas, comunicadas e vendidas. A inteligência artificial, integrada no design de moda, dá origem a novos cenários e actos de construção cultural e social em que a criatividade humana e a tecnologia se fundem em novas abordagens co-criativas e colaborativas. Através da análise de dois estudos de caso significativos, Robbie Barrat e Anna Yang, este contributo pretende investigar as metodologias e práticas através das quais este fenómeno emergente modifica o processo de design de moda e as competências dos profissionais envolvidos. A análise fornece uma visão sobre as formas como os arquivos podem ser transformados em conjuntos de dados e sobre o processo de colaboração humano-tecnológica no design de moda.

KEYWORDS

Artificial intelligence; Co-design; Fashion archives; Phygital.

PALAVRAS-CHAVE

Inteligência artificial; Co-design; Arquivos de moda; Phygital.

Submission date:
 05/02/2024

Acceptance date:
 24/10/2024

1. INTRODUCTION

In 2022 Calvin Wong, professor in fashion at the Hong Kong Polytechnic University, presented AiDA, a device that enables fashion design through AI, allowing users to upload mood boards, color palettes, sketches, or complete patterns and generate new products. The process leads to a close integration of technology and humans, between algorithmic design and human knowledge. On one hand, fashion designers have the opportunity to accelerate the creative process and quickly obtain a large quantity of ideas and images from which to select the most convincing ones. On the other hand, the idea takes shape that even those who are not fashion designers can develop a fashion project and generate clothing and accessories by providing simple textual or visual inputs.

Fashion and technology have always been deeply intertwined, with a succession of technical, formal, and material innovations that allow us to view the history of fashion as a history of technology (Quinn, 2002, p. 3). In investigations of past and present technological changes, the focus is not solely on the diffusion and use of technical artifacts, but also on the acts of social and cultural construction that are intrinsically linked to the context and environment in which these artifacts manifest themselves. Throughout history, humanity has experienced technological change, but only rarely has technology radically transformed the social and political structure of society (Kissinger, Schmidt & Huttenlocher, 2021). As emphasized by Aant Elzinga, professor of Theory of Science, “technological change goes hand in hand with social reordering and cultural reinforcement or dissolution” (Elzinga, 1998).

Technological development in fashion design produces both material and immaterial impacts that range from the micro to the macro scale, from the human body to the territory. These innovations have multiple implications, including the reconfiguration of design and production processes, the redesign of manufacturing spaces, the relationship with territories and production districts, gender issues (Schroeder, 2016), and the redefinition of fashion timelines (Evans & Vaccari, 2020). However, more than other fields, fashion has turned technological innovations into elements of fracture that have generated opposition and different ideas of style, society, and the world: for example, the increasingly evident clashes that have emerged since the end of the 20th century between craftsmanship and industrial production; between handmade and machine-made; between unique pieces and mass production; between fast and slow fashion; between local and global; between analog and digital. These concepts are often considered in opposition and not integrated into a more nuanced panorama. These fractures appear even more pronounced today, in a moment of transition towards the so-called *Industry 5.0*, in which the relationships between humans, technology, artificial intelligence (AI), cloud, and generative design appear complex and difficult to decipher. AI is entering, more or less consciously, many aspects of daily life, ushering in a silent revolution that involves everyone. In fashion, significant changes are shaping the ways we think, design, produce, sell, and communicate.

One aspect that remains relatively unexplored is the application of artificial intelligence in the fashion design process and its impacts on the role and skills of the fashion designer. This contribution aims to begin to bridge this gap. In particular, through the theoretical perspective of the posthuman, it will highlight the possibility that AI becomes a co-designer, an entity to collaborate with, to exchange ideas and visual references, to share texts and archive images, and to generate shapes, volumes, and textures.

From a methodological point of view, the contribution defines a theoretical framework by analysing the existing literature that relates the concepts of posthuman, co-design and archives as data for fashion. The research was conducted by entering the following keywords on Google Scholar: artificial intelligence, co-design, fashion archives, and phygital, showing how this aspect of fashion is still little explored and consequently necessitating a critical analysis on the topic of the contribution. Subsequently, two representative case studies of two different ways of integrating AI in fashion design were selected: Robbie Barrat, investigated as an example of fashion archives as dataset, and Anna Yang, as examples of co-design between human and AI. The analysis conducted also highlighted how many dynamics are transversal

and how there are areas of overlap between the case studies examined. This demonstrates the inherent complexity of the various design acts and further conceptualises the significant role of AI in fashion design.

2. STATE OF THE ART

The fashion sector has undergone numerous transformations over the centuries, shaped by various industrial revolutions, culminating in the most recent one in which the use of new technologies has led to a gradual convergence between physical and digital spaces (Bertola & Teunissen, 2018). The emerging cyber-physical system of fashion involves the use of digital tools, experimentation with algorithms, and neural networks. These changes expand and complicate the role of the fashion designer, who must develop a shared language with other disciplinary knowledge, enhance technical skills, and interact with new software and algorithms. Additionally, the idea that technology allows non-designers and even machines to enter the field of fashion design opens up the possibility of deprofessionalizing the role of the fashion designer. In the current framework, where digital technology is radically transforming the systems of consumption and production of goods, services, and content, this speculation gains greater relevance. This is because, on one hand, the use of digital tools and strategies enables new modes of fashion production and expression; on the other hand, technology, by intervening in design dynamics, offers the possibility to optimize and transfer operations traditionally carried out in an analog manner into the digital realm. The topic of digital transformation has been a part of the debate surrounding the social aspects of fashion for several years, highlighting the need to investigate and analyze emerging forms of change. Literature suggests that fashion transformation is intrinsically linked to the evolution of both individual preferences and social contexts (Pezzini & Terracciano, 2021). Fashion is a “continuous change of styles” (Wilson, 2003, p. 3), but it is also “a structural disposition to accept innovation”, as König emphasized (1988, p. 13, in Segre Reinach, 2010). The future, with its different implications, is shaping the ongoing debate about contemporary fashion (Smith et al., 2017), increasingly aware of being in a transitional moment (Irwin, 2015). The dichotomy between physical and digital, subject to continuous technological innovations that break down the dividing walls of the two meanings, thus lands in new territories of experimentation where everything merges into a single concept: *phygital*. The word *phygital* is a combination of ‘physical’ and ‘digital’, describing the complex interaction between physical spaces and digital technologies and the synergistic experience that combines the potential of both worlds. We find ourselves living in new, augmented spaces that represent a clear extension of our senses and allow individuals to inhabit new realities in unprecedented, fully immersive experiences that revolutionize the fashion universe (Vaccari, Franzo & Tonucci, 2020).

As far back as the 1960s, Marshall McLuhan had predicted that, thanks to technology, humanity would extend its central nervous system, surpassing the limitations of space and time, leading individuals to a new phase of their evolution in which consciousness is technologically simulated and knowledge is collectively shared (McLuhan, 1964). It is evident that today technology extends and expands most human actions into new digital scenarios and environments, allowing for significant changes in the values of many individual activities, including design, organization, and management. With the advent of digital media, our sensory systems have also expanded into space, and at the same time, the nature of space has transformed into a global dimension. This perspective, which considers media as extensions of our human senses – including the possibilities of technological simulation of consciousness – offers new perspectives in the field of fashion, especially as it becomes increasingly smart and interactive (Barile & Sugiyama, 2020). This suggests that, when a technological and cultural process rapidly expands and reaches a peak of intensification, it then transforms into something opposite to what it initially was, contaminating and blending into new phygital scenarios where the physical becomes digital, and the digital becomes physical. Fashion, in its continuous tension between the cultural and industrial system (Kawamura, 2018), constitutes an ideal testing ground for analyzing the

integration of Artificial Intelligence in this *phygital* and immersive space. Currently, literature addresses the topic of AI in fashion almost exclusively from the perspective of marketing, the sales experience, and user experience (Goti et al., 2023; Silvestri, 2020). There is an increasing number of examples of AI applications on e-commerce websites, which suggest products or services to users based on their preferences and buying habits.

While some of the literature explores the use of AI in the fashion system as a tool serving humans – consumers – and their needs (Iannilli & Spagnoli, 2021), other perspectives highlight the limitations of this anthropocentric view. In particular, reflections on the concepts of the posthuman (Braidotti, 2019) and cyborg (Haraway, 2016), introduced in fashion design by Anneke Smelik (2018), Natalia Särmäkari, and Annamari Vänskä (2022), together question the need to abandon an anthropocentric perspective and look beyond the human to seek new alliances with other living and non-living beings, including technology. This perspective allows for overcoming the dichotomies between the human and the non-human, avoiding placing the fashion designer and artificial intelligence in a state of conflict and opening up the possibility of collaboration.

An important aspect of the ongoing phenomenon – still underexplored by current literature and the subject of this contribution – is the role of AI in the fashion design and ideation phases, interpretable as an entity that co-creates and collaborates with the fashion designer. We are witnessing a radical transformation of languages in which it becomes necessary to understand how they can be managed and interconnected. The growing use of AI and digital automation tools in fashion design, which is becoming increasingly algorithmic and generative, exponentially alters this discipline, co-evolving in parallel with technological, social, and cultural changes. The generative design process is therefore examined as an iterative and collaborative process where, starting from an initial goal, the fashion designer defines variables and constraints. These are formalized through inputs capable of guiding the process of a given algorithm, which processes input data a very large number of times, yielding various types of outputs for the fashion designer (Nachtigall, 2021). Consequently, it is the designer, from a collaborative perspective, who analyzes and experiments with the calculation results, modifying the starting inputs if they do not conform to the designated goal. The iterative and cyclical nature of operations defines the process, which can be regenerated infinitely until a product that meets the desired requirements is achieved. Artificial intelligence is based on the analysis and interpretation of significantly complex data to generate predictions and create text and images based on the same data. According to Gloria Maria Cappelletti, creative director of RED-EYE, the first magazine dedicated to the links between fashion, artificial intelligence, and the metaverse, harnessing the potential of AI to design products based solely on consumer-related data, their searches, and purchasing experiences represents a potential drawback in this new scenario. There is a risk of producing collections that reflect the taste of a global market, preventing young fashion designers or independent brands that lack the resources to adopt new technologies from progressing (Vaccari & Franzo, 2022, p. 62). In parallel, according to her analysis, creativity should be promoted and supported, freeing itself from consumer demands, as in fashion, the most significant moments have occurred when designers have radically challenged the system, breaking the rules dictated by the demands of the moment.

3. CASE STUDIES

Starting from this framework, we will analyze two case studies in which AI has been integrated into the fashion design process, with the aim of conceptualizing two phenomena: the transformation of a fashion brand's archive into a dataset that AI can reprocess to generate new outputs in line with the previous aesthetic, and the development of co-design processes in which fashion designers, non-designers, and artificial intelligence collaborate to generate new ideas and products. The first approach is investigated through the work of Robbie Barrat, through the concepts imagined for Balenciaga and the collection developed by the artist in collaboration with Acne

Studio; the second through the work of Anna Yang, fashion designer of the Annakiki brand. Robbie Barrat is an artist and graphic designer who uses artificial intelligence as both a tool and a medium. In 2018, as a personal project, Barrat used AI to generate images of a hypothetical collection for Balenciaga. He incorporated and utilized images extracted from extensive online documentation of the brand, including lookbooks, catalogs, and marketing campaigns, to train the pix2pix neural network. Using a GAN (Generative Adversarial Network), Barrat was able to closely examine the machine learning process, identifying the selected images within the latent space of the GAN, which can be informally thought of as an abstract space where synthetic images are generated before being transformed into visually perceivable images on the display. By analyzing the GAN's learning process and accessing the latent space, Barrat selected synthetic images with specific characteristics or visual styles, using them for further analysis as well as for artistic and design purposes. The final result of the procedure was a series of images that contained representations of models with physical anomalies or unusual clothing and color combinations that deviated from the brand's style. From the analysis of the images, it is evident that the network lacks any contextual awareness of the functional aspects of clothing. This is reflected in high shoulders and necks, pants with bulky bags attached to the leg, jeans and sweaters grouped into a single piece; accessories, such as bracelets, often appear as fragments of fabric held in the model's hand; belts and bags merge into the models' legs (Fig. 01).



Fig. 1
Robbie Barrat, A look from
a hypothetical Balenciaga
collection created with AI, 2018.

Even more significant for the investigation is a second project developed by Barrat: the collaboration with the fashion brand Acne Studios, culminating in the Fall/Winter 2020 men's collection. Unlike the previously analyzed case, here the exploration of artificial intelligence's potential did not limit itself to the concept and 2D visualization phase of ideas but continued with the physical production of garments generated by AI. Within a neural network – trained by Barrat not to learn according to the classical fashion standards – thousands of looks from the brand's archives were input. The outputs returned by the neural network were unconventional fashion images where it is possible to identify defects caused by algorithm misinterpretations. Faithfully utilizing the renderings obtained through artificial intelligence, creative director Jonny Johansson then physically reproduced the selected outfits, retaining the same errors caused by the neural network in the garments produced (Fig. 02).

Examples include a perforated shirt resulting from glitches generated by the low-quality rendering engine, a buttonless polo, distorted and warped snake-skin prints, unique curved openings in the front and bottom of the presented coats, a direct consequence of the algorithm's malfunction in processing clothing edges, and wrinkled or frayed fabrics (Fig. 03).



Figs. 2 & 3

(Left) Acne Studio, Fall/Winter 2020 men's collection, collaboration with Robbie Barrat and AI, 2020. The physical garment reproduces the glitches and the errors of the digital garment obtained with AI. (Right) Acne Studio, Fall/Winter 2020 men's collection, collaboration with Robbie Barrat and AI, 2020. The physical garment reproduces the glitches and the errors of the digital garment obtained with AI.

The second case study analysed in this contribution, focused more specifically on the dynamics of co-design that are activated, is the work of Chinese fashion designer Anna Yang, founder and creative director of the Annakiki brand. In 2019 she co-designed a fashion collection with AI using a smartphone and a mobile app. A particular process was adopted that leverages the dual neural processing unit (NPU) found in smartphones from the Asian brand Huawei. Artificial intelligence was trained by providing a dataset of 30,000 images representing the most relevant fashion shows of the last hundred years and a specific set of photographs of Annakiki's latest collections. Subsequently, the Fashion Flair app was used to involve the brand's customers in the design process, further expanding the co-design process. An image gallery was generated by AI and indexed to respond to the application of four user-set filters: colors, shape, length, texture; each user could choose the desired parameters and select images proposed by the app's gallery, one for each filter; AI generated outputs in line with the user's preferences (Fig. 04).

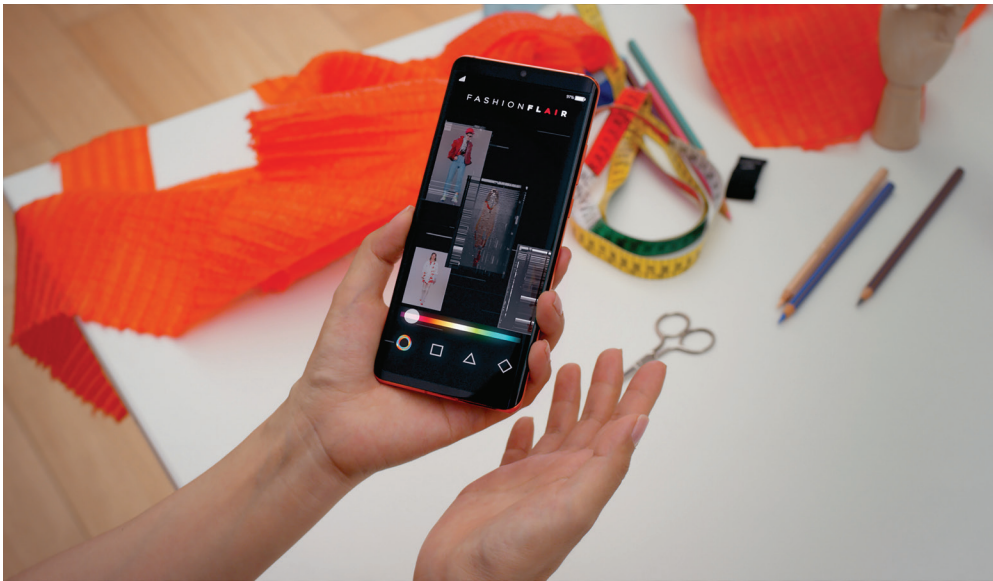


Fig. 4
Annakiki, Co-designing with
Fashion Flair AI app, 2019.

The fashion designer entered the design process only at the end of this phase, selecting the images obtained from the collaboration between AI and customers and further adapting them to the brand's style. The result of this process manifested itself in May 2019 with the Annakiki collection for Huawei, consisting of twenty outfits presented in a fashion show and sold in stores.

4. FINDINGS

The analysis of the case studies described in the previous section shows how the integration of artificial intelligence in fashion design is significantly redefining the methods and processes of the fashion system. In particular, by analysing the project in which Robbie Barrat realizes hypothetical concepts for Balenciaga, we are able to more clearly conceptualize the design changes taking place. In the traditional ideation phase, fashion designers use sketches, drawings, and prototypes as tools to construct external representations of their design concepts. Barrat's work demonstrates how the integration of artificial intelligence into this initial phase of the design process revolutionizes and accelerates the process, allowing for immediate comparison between the idea and its representation, and expanding the designer's creativity. This acceleration of ideation processes gives rise to the concept of 'ultra-fast fashion'. The aforementioned definition is not related to the issue of excessive and rapid material production of clothing and fashion accessories, but rather to the speed of immaterial production that artificial intelligence models have in generating an infinite quantity of images in very short timeframes.

From the collaboration between the artist and the Acne Studio brand, it emerges in more detail how in this phygital territory the methodologies of fashion design evolve and hybridise, manifesting new forms of reverse design (Vaccari, 2012, p. 89). The creative process, in fact, arrives almost instantaneously at a photographic visualisation of how the final product should appear and, through work on materials, modeling, fit, and details, reconstructs the garment in every detail. Furthermore, the analysis of Robbie Barrat's work on fashion archives as sources of data for the project allows us to theorise how fashion is created and worn using data as materials. The act of making specifically does not translate, in the analyzed case, only as a performative act, but also as a creative act involving the construction and transformation of meaning (Sanders & Stappers, 2014), the result of mixing and hybridising with various knowledge, disciplines and artefacts. Starting from data, which can thus be considered as the metaphorical DNA of the products designed by the artist, another reflection brings out their close connection with fashion design in terms of ephemerality. Fashion is ephemeral

as data itself is ephemeral, showing on the one hand how fashion designers have quickly learnt to manipulate the transitory nature of fashion by orchestrating its trends, and on the other hand how data and fashion influence each other. This is because it is evident how data science is able to tell us something about fashion and how fashion history is able to tell us something about data science. This case study demonstrates how, through the use of artificial intelligence, it is possible to combine the physical and digital environments, reactivating archival materials, reinterpreting the brand's heritage, expressing a new form of creativity, and materializing it through technical and manual skills. Fashion is configured both in its physical and digital dimension in a continuous wave motion capable of generating new futures.

From the analysis of the second case study, Anna Yang with her Annakiki collection in collaboration with Huawei, the alteration of design processes with the integration of AI and the close interdependence between technology and humans becomes more evident. In particular, in this case, the project arises from a close relationship between fashion designers, artificial intelligence, the brand's archive, the history of fashion, and customers. Through the app, users and their preferences actively participate in the ideation process, providing moodboard and concept indications to the design team and, notably, to AI. The fashion designer therefore finds himself interacting not only with bodies, but also with the mind, the senses, and thought, living in a world of non-things (Han, 2023). At the same time, new collaborative relationships emerge, established not only through the use of new technologies, but also through the acquisition of new knowledge and synergies in a transdisciplinary and co-design perspective in which the fashion designer is transformed into an increasingly hybrid figure, hybridised by the metamorphoses of time. The designer is transformed from Human to 'Human+' (Ranzo & Scarpitti, 2023), not to be understood as an empowered figure, but as a figure capable of going beyond any existing anthropological type. Generative systems offer, as analyzed in Anna Yang's work, a real paradigm shift (Kuhn, 1996) in design practice, in the design process and in the material expression of the process. This shift affects the interpretation that designers can give to artefacts and the actions that manipulate them (McCormack et al., 2004), effectively shifting the focus from individual objects and components to a holistic and collaborative view that interprets artefacts as systems and processes composed of interacting parts.

5. CONCLUSIONS

The development of new technologies and Artificial Intelligence is profoundly altering the fashion system as a whole. The awareness of being in a transitional phase leads to a reconsideration of previous logic and the professions involved. But, above all, it requires the formulation of new questions, and not simply new answers to the same questions of past decades. The question arises to what extent artificial intelligence and the data processed by it influence the meaning and perception of a garment, whether methods such as co-design or participatory design empower and alter the role of the fashion designer, and how AI transforms fashion design.

As highlighted in this contribution, the design process is inevitably redefined due to the unprecedented relationships between humans and technology. The proliferation of AI systems, as explored, impacts both design theory and practice. The relationship between the design process and technology now transcends the purely functional level to enter the realm of the existential. Through the analyzed case studies, it has become apparent how the creative processes are changing, what role archives and history can play, and how designers, non-designers, customers, technology, and the material and immaterial dimensions can collaborate. AI integrated into fashion design, in fact, transforms the fashion project into an iterative flow based on reactive feedback where processes are influenced not only by the use of data as new design tools but also by the artefacts themselves which, once selected and prototyped, could feed the artificial intelligence algorithms in order to obtain new variants

of the same, in a perpetual cycle that is difficult to stop. It becomes, therefore, essential to bring back to the centre of the debate the role of the fashion designer who becomes essential in the project to manage the generative flow.

It is evident that the acceleration of processes and idea visualization through AI allows for resource optimization and a reduction in experimentation and material consumption, facilitating more sustainable approaches. One of the main implications of this evolving landscape is the possibility for new professionals, both human and non-human, to be involved in fashion design. Just like human fashion designers, computers can be legitimized and authorized for fashion design. However, this occurs through input provided by humans, allowing them to guide the workflow. At the same time, machine designers may take on new roles as designers, employing innovative approaches to meet the needs and desires of people. However, although artificial intelligence can produce many formal, aesthetic and content implications, the generative approach applied to fashion design has constructed an induced aesthetic that could homogenize artifacts both from a formal and design point of view. There is a chaotic proliferation among various entities that refer without any logical, conceptual and functional connection to fashion products of difficult interpretative key complicating the role of the fashion designer. The designer, in fact, finds himself in an additional effort of physically reworking the random outputs generated through automatisms by a software that iterates a series of operations without any understanding or knowledge of the discipline of fashion design. This is strongly manifested in both case studies investigated in which, on the one hand, significant flaws in the construction and structure of the models explicitly emerge and, on the other hand, the need to intervene in the outcome of the generations by redesigning their silhouettes.

ACKNOWLEDGEMENTS

The authors shared the approach of the text and jointly wrote paragraphs 1 and 5. Paragraphs 2 and 4 were written by Paolo Franzo. Paragraph 3 was written by Andrea Quartu.

Project funded under the National Recovery and Resilience Plan (NRRP), Mission 4 Component 2 Investment 1.3 - Call for tender No. 341 of 15/03/2022 of Italian Ministry of University and Research funded by the European Union – NextGenerationEU

Award Number: PE00000004, Concession Decree No. 1551 of 11/10/2022 adopted by the Italian Ministry of University and Research, CUP B83C22004890007. MICS (Made in Italy - Circular and Sustainable).

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Reference According to APA Style, 7th edition:

Cianfanelli, E., Franzo, P., & Quartu, A. (2024) Co-Designing Fashion with AI in the Phygital Scenario. *Convergências - Revista de Investigação e Ensino das Artes*, VOL XVII (34), 79-90. <https://doi.org/10.53681/c1514225187514391s.34.269>

Case Report

DOI: 10.53681/c1514225187514391s.34.232

APPLICATION OF VISUAL DESIGN (OR MULTIMEDIA DESIGN) TECHNOLOGIES IN CONTINUING DESIGN EDUCATION IN UKRAINE

Aplicação de tecnologias de design visual (ou design multimídia) na formação contínua em design na Ucrânia

ABSTRACT

The search for effective innovative approaches to teaching and developing students' creative potential, as well as training qualified professionals who will meet the needs of a rapidly changing society, is a topical and prominent issue today. The purpose of this study was to thoroughly investigate and analyse the role of visual design technologies in the context of design education in Ukraine. The study used methods of analysis, synthesis, and a typological approach. As a result of this study, an in-depth analysis of the role of visual design technologies in the context of design education was performed. The study found that the use of modern visual design technologies creates new opportunities for students, including the ability to experiment with unique design ideas and concepts, interact with virtual objects and receive instant feedback. This approach promotes active learning, stimulates creativity, and the development of critical thinking in students. It was found that design education and multimedia technologies support the development of creative thinking, promote innovation, and interdisciplinary communication. This study confirms the importance of applying visual design technologies in design education and reveals the prospects for the development of this industry in the modern world. The findings of this study can be used to develop updated approaches to teaching in continuing design education.

RESUMO

A procura de abordagens inovadoras e eficazes para ensinar e desenvolver o potencial criativo dos estudantes, bem como para formar profissionais qualificados que satisfaçam as necessidades de uma sociedade em rápida mutação, é uma questão atual e proeminente. O objetivo deste estudo foi investigar e analisar minuciosamente o papel das tecnologias de design visual no contexto da educação em design na Ucrânia. O estudo utilizou métodos de análise, síntese e uma abordagem tipológica. Foi estabelecido que as modernas tecnologias de design visual têm um potencial significativo para melhorar a qualidade e a eficiência do processo educativo no domínio do design. O estudo concluiu que a utilização de tecnologias modernas de design visual cria novas oportunidades para os estudantes, incluindo a capacidade de experimentar ideias e conceitos de design únicos, interagir com objectos virtuais e receber feedback instantâneo. Esta abordagem promove a aprendizagem ativa, estimula a criatividade e o desenvolvimento do pensamento crítico dos alunos. Verificou-se que o ensino do design e as tecnologias multimídia apoiam o desenvolvimento do pensamento criativo, promovem a inovação e a comunicação interdisciplinar. Este estudo confirma a importância da aplicação de tecnologias de design visual no ensino do design e revela as perspectivas de desenvolvimento desta indústria no mundo moderno. As conclusões deste estudo podem ser utilizadas para desenvolver abordagens actualizadas do ensino na formação contínua em design.

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Submission date:

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Acceptance date:

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KEYWORDS

aesthetics; educational process; professional training; modern didactic approaches; innovations.

PALAVRAS-CHAVE

estética; processo educativo; formação profissional; abordagens didáticas modernas; inovações.

1. INTRODUCTION

Visual design, supported by multimedia technologies, helps engage students in active and hands-on learning, stimulates their creativity and promotes critical thinking. The visual design creates visually appealing compositions. It uses visual elements, principles, and techniques to communicate, evoke emotions, or solve design problems. Visual design is used in graphics, web, UI, branding, advertising, and other fields. The use of such technologies in lifelong design education opens wide opportunities for students to learn and develop design skills, prepare for the challenges of modern design, and build a successful career in this field, and therefore it is necessary to investigate the aspects of their use in more depth. The problem of this study was to identify, analyse, and solve complex issues related to the use of multimedia design technologies in modern continuous design education. The study covers the challenges and obstacles faced by teachers and students when using visual design technologies in design education of a continuous nature.

Multimedia encompasses the amalgamation of a wide range of media types—text, images, audio, video, and interactive components - to impart knowledge, provide entertainment, or transmit messages in an engaging and varied fashion. This technology facilitates the smooth integration of diverse media formats to generate interactive and immersive experiences, including but not limited to lectures, presentations, websites, and video games. As a result, it improves the capacity to communicate concepts, disseminate knowledge, and engross audiences across a multitude of digital platforms and devices.

Averianova & Gook (2021) note that in modern society, design has become more diverse, covering many different areas. New terms such as:

1. Design Thinking addresses complex problems and creates innovative solutions using a human-centred, iterative approach and mindset. It emphasises empathy for users or stakeholders, creativity in ideation, and a structured prototyping and testing process. Design Thinking is popular in product, service, business strategy, education, and healthcare.
2. Social Design addresses complex social and societal issues through multidisciplinary design. It uses design, social sciences, and community engagement to create innovative solutions that improve people's lives. Social Design prioritises social impact, inclusivity, sustainability, and empowerment of marginalised and underserved populations over traditional design goals.
3. Social Design Strategy Social Design Strategy is a deliberate and systematic use of design thinking and principles to solve complex social and societal issues. It involves using design methods to create innovative and effective solutions to social issues, improve community well-being, and promote positive social change.

Today, design is undergoing a gradual transformation, which is associated with a change in the views and beliefs of young designers regarding the understanding of the essence of contemporary design, its place in the service market and their professional activities.

Meyer & Norman (2020) in their study of design education in the 21st-century point to the

need for changes in continuous design education. Scientists note that the modern design education system does not always provide students with the necessary skills to perform the complex tasks that designers face. In their study, they emphasise the importance of developing creative solutions to complex problems that require an innovative approach. The scholars point to the importance of using visual design technologies and multimedia to improve the design process and develop students' creative skills. The researchers also note that designers can learn from the experience of other professions, such as medicine, law and business, which have successfully integrated technology and learning practices into their educational curriculum. Scientists note that to achieve these goals, conscious efforts are needed to develop the design profession as a community of practitioners and teachers (Meyer & Norman, 2020). It is necessary to investigate this aspect of design education more carefully.

Diachenko (2020) identifies the shortcomings of Ukrainian design education, which include a limited number of specialties and their excessive versatility, lack of connection between education and reality, distortion of the gender component in design education, lack of classrooms and equipment for specialised training, inconsistency with modern professions in the Ukrainian and international markets, as well as the use of outdated methods and mechanisms in the learning process. These shortcomings, according to the scholar, make it impossible to fully adapt Ukrainian design education to the modern requirements and challenges faced by professionals in this field. The scientist emphasises the need for radical and comprehensive changes in the form and system of design education, which would consider innovative approaches to student selection, training, and project evaluation. In the researcher's opinion, it is especially important to make a clear distinction between the design of the object sphere, the design of intangible objects, the design with an artistic bias, and the design with a technological orientation. According to the researcher, changes in the number of hours, mergers and division into departments are ineffective, and therefore it is necessary to rethink approaches to education to ensure the design of education that is more effective and adapted to modern challenges. It is worth exploring the possibilities of reorganising design education based on the use of modern design technologies.

Researchers Chiang et al. (2021) point out the importance of using multimedia design in design education as a way to adapt to modern requirements and develop key skills in students. Scientists note that there is a need to develop an adaptive approach to design education, namely, to adapt programmes and teaching methods to the current needs of students and modern design. According to the researchers, it is also important to use digital tools, software, and technologies to create and execute design projects. Scientists are convinced that the use of multimedia will allow students to expand their creative capabilities, and express their ideas and concepts through various media formats such as graphics, video, and audio. Notably, multimedia design does indeed contribute to the development of important skills in young professionals, such as visual thinking, communication, critical thinking and collaboration, which are key to success in the modern design industry, but it is worth exploring additional aspects of the use of visual design in modern lifelong design education (Chiang et al., 2021). According to a study by Tymenko & Brovchenko (2022), creative intelligence is manifested in the ability to innovative forming, which includes the development of innovative design concepts, creation of variable design solutions, production of prototypes and exclusive product samples. Scientists point out that the system of national design is still in formation in Ukrainian society. The researchers assert that Ukrainian ethnic designers lack a comprehensive educational system for Ukrainian design, which hinders the growth and advancement of their ethnic design talent. However, the professional practice of designers shows that they have a natural ability to anticipate the energy potential of future forms of the built environment. Scientists note that Ukrainian specialists can embody the experience of former civilisations that had mechanisms of ecological and spiritual self-regulation, specifically, designers are characterised by the Trypillian (culture, which existed in Ukraine during the Neolithic period) worldview "matrix" – a complex system of symbolic forms, ornaments, pictograms that serve as a kind of artistic and figurative "writing" containing information about the

structure of the universe, the principles of its functioning and the place of a person of Ukrainian origin in it. It is worth studying this aspect of Ukrainian design education in greater detail (Tymenko & Brovchenko, 2022).

This comprehensive study of modern technologies, particularly visual design technologies and multimedia, in design education, shows their potential to improve student learning. These technologies encourage active and hands-on learning, creativity, critical thinking, and “Design Thinking” and “Social Design Strategy.” Researchers have identified several challenges in continuous design education, including the need for a more adaptive approach, addressing education system flaws, and rethinking design education’s structure and focus. Technology and multimedia in design education show promise, but more research and innovation are needed to connect education to real-world needs. The unique cultural and artistic expression potential of Ukrainian design education must also be developed. This study emphasises the need for continuous improvement and innovation in design education to prepare students for the 21st-century’s dynamic design industry.

The research aims to investigate the potential of contemporary visual design technologies in offering students novel opportunities, such as the ability to explore original ideas and design concepts, engage with virtual objects, and receive instant feedback. The study seeks to examine the effects of utilising visual design technologies on promoting active learning, fostering creativity, and cultivating critical thinking skills in students. Furthermore, the study aims to reveal the prospects for expansion in the realm of visual design technology in contemporary society.

2. MATERIALS AND METHODS

This paper used the analytical method of scientific research, synthesis, and typological approach. Using the method of analysis, this study examined the role of visual design technologies in design education. The application of the analysis method helped consider various aspects of the use of visual design in education in detail, including the effectiveness of technology, its impact on the quality of learning and student development, and current trends and innovative approaches related to the use of visual design technologies in the educational process. The analysis helped to identify the benefits of using modern visual design technologies and its potential to improve design education, to provide students with practical skills in using various design tools and software, as well as effective communication and collaboration with peers and teachers. Using the analytical method, it was possible to identify the experimental possibilities of visual design technologies with new ideas and concepts in modern education and its role in stimulating students’ creativity. Furthermore, the analysis method allowed investigation of the modern views on design education, including more interactive and dynamic approaches to learning, developing critical thinking, and students’ creativity, and supporting them in solving real design problems.

This study will examine how visual design technologies affect design education using analysis. The evaluation criteria will include technology efficacy, its impact on learning quality and student development, and current trends and innovative methods for integrating visual design technologies into education. In addition to reviewing scholarly works, the analysis phase will collect empirical data from student and educator surveys or interviews. A comprehensive evaluation of the subject will be achieved through quantitative and qualitative data analysis. Using the method of synthesis, the study combined visual design technologies with modern lifelong education. This method of scientific research allowed the creation of innovative solutions and investigated the relationship between technological capabilities and the educational goals of design education. The synthesis method helped establish the benefits of using visual design technologies in continuing design education, specifically, improving the perception and assimilation of information, and it was found that the use of multimedia elements such as video, images, and animation makes the learning process more dynamic and interesting. The synthesis method will combine visual design technologies and modern lifelong education

in this study. The assessment will focus on how technological capacities relate to design education pedagogy. This research seeks to determine how multimedia—video, images, and animation—enhances education by adding vibrancy and engagement. The synthesis will combine analysis results with educational theories and models. This may inspire new visual design education methods for lifelong design education.

This study used a typological approach to explore the basic terminology. This approach helped systematise and classify various aspects of the research area, which provided a better insight into their nature and interrelationships. Using a typological approach, the main concepts that contributed to the coverage of the subject under study. Based on this approach, the study identified the main aspects of design, including visual perception, functionality, ergonomics, and interactivity. In addition, using a typological approach in this study, it was possible to identify the scope of design education, including the study of design principles, methods and skills, as well as the development of student's creative and analytical abilities, which contributes to the formation of creative thinking, the ability to work with change and solve complex problems, which are important elements of the educational process. Based on the typological approach, the concepts of lifelong design education, namely the idea of continuous learning and development in the field of design throughout life, were studied in this paper. Using this approach, the study identified the main aspects of the concept of lifelong learning, including learning in various formats and contexts, such as formal education, self-education, professional courses, and master classes, which strengthen professional skills and update the knowledge of specialists.

A typological approach will be needed to classify and organise design education aspects in this study. This methodology organises fundamental principles, design aspects, and design instruction. Design education fundamentals will be categorised using this typological method. This taxonomy helps explain design education's complex aspects, including creative and analytical skills, ergonomics, interactivity, visual perception, and functionality. The typological approach will also examine lifelong design education, taking into account formal education, self-directed study, master's programmes, and professional courses that help design professionals improve their skills.

This study endeavours to comprehensively examine the function of visual design technologies in design education, contemplate their pragmatic ramifications, and investigate their theoretical underpinnings in the wider framework of lifelong learning through the application of these distinct methodologies.

3. RESULTS AND DISCUSSION

3.1. Modernity and prospects of design education: Development of creative potential and innovative thinking

In the modern world, it is important to have competent and creative professionals who can work with visual design technologies. These professionals need continuous design education to generate innovative ideas and quickly adapt to the changing needs of society (Ivanenko & Nesen, 2023). They must have imaginative thinking, modelling, and design skills, and apply a creative approach to solving complex professional problems. Design is defined as the process of creating, planning, executing, and evaluating a product or solution that meets a specific need or solves a specific problem. Design is also considered as a combination of aesthetic, functional, technical, and contextual aspects that influence the result (Derevyanko & Zalevska, 2023). It is a creative process that requires imagination, innovative thinking, analytical, and problem-solving skills, focused on creating a favourable user experience and solving particular tasks or problems related to communication, interaction, functionality, and aesthetics of a product or solution. Design also involves the use of various methods, techniques, and tools, such as research, analysis, conceptualisation, prototyping, and iteration, to develop ideas and turn them into real products or solutions (Fleischmann, 2019).

Modern design education is a unique process that combines professional and scientific knowledge to solve problems related to human life and interaction with the environment. It is an artistic and design activity aimed at performing a communicative function, where creative methods and tools are used to implement ideas and communicate with the world around us. Design education is focused on developing students' creative and critical thinking skills, as well as understanding and applying design principles and methods in different contexts. This may include studying design as a separate subject, developing design projects, collaborating with other designers and specialists, and using tools and technologies used in design (Ejsing-Duun & Skovbjerg, 2019). The development of aesthetic taste, creative potential and the ability to think innovatively is one of the outcomes of design education. It supports students in developing skills in working with design ideas, prototypes, project implementation, and evaluating their effectiveness. The main goals of design education are to prepare students for the challenges of the modern world, and to develop their creativity and ability to make positive changes through design.

Design education has a considerable impact on the modern world and is a vital component of the modern educational system. It offers students a unique opportunity to develop creativity, critical thinking, problem-solving, and communication skills. Design education teaches students to analyse, conceptualise, and solve problems using the ability to integrate knowledge from different disciplines. It promotes creativity, innovation, and aesthetic perception. Designers are trained to work with materials, colours, shapes, and space, enabling them to create functional and attractive solutions. Furthermore, design education develops communication and collaboration skills, as many designers work in teams (Diahyeva et al., 2023). It teaches students how to communicate effectively, work on joint projects, and consider different opinions. In today's digital world, design education also includes the use of technology and software to create design (Dzhusubaliyeva et al., 2021; Koshoeva et al., 2023). It teaches students how to use digital tools and understand how they can improve the design process and outcomes. In general, design education is important because it provides students with a set of skills and knowledge needed to develop creativity, solve problems, and create innovative solutions. It also prepares young people for the challenges of the modern world and opens wide opportunities for career growth and personal development (Derevyanko & Zalevska, 2023). Design education's importance today cannot be overstated. It develops skilled and creative visual design professionals who can quickly adapt to society's changing needs. Design is a dynamic process that requires creative thinking, problem-solving, and a complex blend of aesthetic, functional, technical, and contextual factors. Modern design education combines professional and scientific knowledge to develop students' creative and critical thinking skills, enabling them to solve complex problems in diverse contexts. It develops aesthetic sensibilities, creative thinking, and practical skills needed to complete design projects. Design education also develops communication and collaboration skills, essential in a world of interdisciplinary teamwork. Technology and software skills are integrated to prepare students for the digital age. Design education prepares students to positively impact a rapidly changing world and provides many opportunities for personal and professional growth by teaching them to be creative problem solvers, effective communicators, and innovative problem solvers.

3.2. Lifelong education in the art of design: concept and practice

Lifelong education means the ability to ensure the continuity of the educational process and the preservation of educational standards, despite changes in the format and environment of learning. This type of learning activity requires the adaptation of educational practices to new conditions and learning tools. In such circumstances, students tend to find themselves in need of support, communication, and resources to ensure the continuity of their learning. Furthermore, lifelong education involves active interaction between participants in the educational process and support for students in their learning (Manca & Delfino, 2021). Therefore, adapting educational practices to new challenges, providing support for students and maintaining high standards of education even in situations of crisis or emergency is an important element of the educational process.

The concept of lifelong learning using technology, focusing on the approach to learning, is also known as heutagogy. This concept envisages the active role of independent learning and self-regulation of students in the learning process. Heutagogy is designed to encourage students to self-organise, self-improve, and self-develop, providing them with the skills necessary for lifelong learning. Technology can play a vital role in supporting lifelong learning. It provides students with access to a variety of resources, interactive platforms, collaborative work, and other opportunities for independent learning. Technology also contributes to the flexibility and accessibility of learning, allowing people to study at any time and place convenient for them (Lock et al, 2021; Moore, 2020; Samoylenko et al., 2021). The use of technology is important to support lifelong learning and contributes to the development of a heutagogical approach that promotes active and independent lifelong learning. The concept of lifelong design education involves the integration of design into all stages of the educational process, from the primary level to higher education and professional development. The main idea of this concept is to create a learning environment in which design is not only a separate subject of study, but an integrated element in various disciplines and areas of knowledge. The concept of lifelong learning can be applied and used in design education in several ways:

1. Integration of design at all levels of education: The concept of lifelong learning allows for the inclusion of design as an integral part of curricula at various levels of education, from primary to higher education. This can include teaching design as a separate subject, as well as integrating design elements into other disciplines and areas of knowledge.
2. Development of creative and innovative skills: The notion of lifelong learning in the field of design fosters the growth of innovative problem-solving skills, creative reasoning, and the capacity to handle intricate challenges. It fosters the growth of design thinking, which is the capacity to conceive of novel concepts and seek out unconventional resolutions.
3. Use of modern technologies: The concept of lifelong learning in design includes the use of modern technologies that help expand the possibilities of design and create new forms of learning. This may include the use of virtual reality, computer-mediated communication, mobile devices, and other tools to help create innovative learning environments.
4. Professional development and self-fulfilment: The notion of lifelong learning in design facilitates the ongoing development and enhancement of the skills and competencies of both students and practising designers. It fosters an environment conducive to ongoing professional development, independent learning, and personal satisfaction within the domain of design.
5. Communication and collaboration: The concept of lifelong learning in design supports collaboration and communication between students, practising designers, teachers, and other professionals. It stimulates teamwork, exchange of experience and mutual learning, which contributes to the development of a professional community and the exchange of ideas.

In conclusion, lifelong learning, especially in design education, emphasises the need for flexibility, support, and rigorous academic standards in a rapidly changing world. Heutagogy, which promotes self-management, self-improvement, and personal growth, allows people to take charge of their educational paths. Technology helps continuous education by providing access to resources and flexible learning opportunities. Lifelong design education promotes collaboration, innovation, creativity, and the use of modern technologies at all levels of

education. Education that meets the changing needs of the design industry develops practical skills that can be used to solve design problems and inspires creativity. In essence, ongoing design education ensures that students and professionals have the skills to succeed in the ever-changing field of design, advancing the field.

3.3. The importance and benefits of using visual and multimedia design in the educational process

The use of visual and multimedia design technologies in continuing design education can provide students with a more active and interactive form of learning (Koshoeva et al., 2023). For instance, multimedia presentations, videos, and graphics can help students better grasp complex concepts and notions and engage them in the learning process through visuals and interest. The use of visual design can also help increase student motivation and reduce study fatigue. Aesthetically pleasing and well-organised materials can stimulate interest in the learning process and contribute to a positive emotional response from students. In addition, the use of visual design technologies can contribute to more effective information transfer and improved communication between the teacher and students. Structured presentations, graphs, diagrams, and other visual elements can help students better understand and remember information, and help the teacher convey complex concepts in a clear and accessible way (Kalashnyk et al., 2020). These technologies in continuing design education can make learning more interesting, effective, and favourable for students, helping them to better understand, remember and apply the information they receive.

The use of visuals, animation, graphics, and other multimedia can help students better understand and perceive design processes and concepts. Positive emotions, such as excitement, enjoyment, and interest, are key factors that encourage students to positively engage with video-based learning material. Furthermore, the interaction with the video (e.g., the ability to comment or share) and the perception of the content also influence student preferences. The quality of teaching, clarity and well-structured presentation also plays an important role in the effectiveness of the learning process (Shoufan, 2019). It is worth emphasising the importance of ensuring quality teaching and structured presentation of content in video format. Design education should pay attention not only to the content itself, but to the way it is presented, the use of visual and audio elements, graphics, animation, and other multimedia that can improve students' perception and motivation. Thus, the use of multimedia design in design education can be an effective means of engaging and motivating students.

The use of visual and multimedia design technologies in lifelong design education is not limited to consumer strategies or product value propositions. Design in this context embodies a holistic sphere that becomes the object and subject of educational activity, design ethos and design aesthetics. This interaction of ethos, aesthetics, and activity shows that the designer plays the role of a director, philosopher, and art critic who creates the integrity of culture through the material mediation of cultural creation. This whole never loses its mythogenic and metaphorogenic features, but instead manifests itself as artistic features that allow regarding design as art. Bringing design into the sphere of artistic culture, we face the task of defining its place and considering the art of 20th-century culture itself as a certain project. Material mediation stratifies and enlarges the dimensions of immanent design when an individual, the world, and the planet become material but with the philosophical connotation of a commodity, coexistence, the market of being, and being for oneself and others. This enables the consideration of design as meta-design and allows observing its reflexive systems as holistic reflexive practices that exist in the field of design (Antonovych, 2011). It is worth paying attention to the main aspects of using multimedia and visual design in design education (Tab. 1). These aspects define the main characteristics and role of each type of design in student learning and development.

No.	Aspects	Multimedia design	Visual design
1	Design objects	Websites, interactive applications, videos, presentations, games, cartoons	Logos, posters, packaging, web design, illustrations
2	Forms of expression	Text, images, sound, animation, video	Graphics, colours, composition, typography
3	Objectives	Creating interactive and multidimensional digital products	Development of aesthetically pleasing and functional visual solutions
4	Skills	Development of multimedia applications, use of software tools, animation, video editing	Proficiency in graphic software, knowledge of colour theory, composition, typography
5	Areas of application	Interactive web design, advertising, media, entertainment industry	Branding, advertising, product packaging, print graphics, web design
6	Key principles	Interactivity, effective communication, user interaction	Aesthetics, perception, functionality, balance
7	Technologies	Development of web applications, graphic editors, animation programs, editing programs	Graphic editors, design systems, colour palettes, typographic tools

Tab. 1

Aspects of multimedia and visual design application in the educational field of design.
(Source: compiled by the authors).

The use of visual and multimedia design technologies in lifelong design education is important because it promotes innovative approaches to learning, providing students with access to innovative tools and technologies that help them develop design skills. Using modern tools, students have the opportunity to learn and experiment with a variety of software tools, computer programs, graphic editors, video and audio tools and other technologies that are essential in modern design. Such an approach empowers students in the creative process, allowing them to freely express their ideas and concepts through digital media.

In conclusion, visual and multimedia design technologies in continuing and lifelong design education offer many ways to improve student learning. These technologies simplify complex concepts and motivate students by creating interactive learning environments. Multimedia design improves information transfer and comprehension and enhances educational materials' aesthetic appeal, eliciting a positive emotional response. Therefore, design education benefits from using visuals, animations, graphics, and multimedia to explain design processes and concepts. It expands design into a cultural and artistic realm where design ethos and aesthetics meet education. Multimedia and visual design technologies allow students to experiment with new tools, preparing them for the ever-changing design world.

3.4. Design education in a global context: Current challenges and prospects for transformation

In modern Germany, some challenges related to design education have become clear. Despite the long and successful history of German design education, prominent scholars note the need to revise it. Researcher D.A. Norman expresses the opinion that traditional design education in Germany has performed its role well and should not be rejected, but it does not meet all modern needs (Norman, 2016). The scholar emphasises that modern design, like other fields, encompasses a variety of disciplines, some of which are new, and require technological, analytical, and cognitive skills that are not covered by traditional curricula. In her study of German lifelong design education, Held (2018) points out that in Germany, design is between two poles in the context of perception by the outside world, as well as in its self-esteem as a profession. On the one hand, as the researcher notes, design is used to develop new products and services, mostly for improvement, although sometimes only on a superficial level or as variations aimed at increasing consumption. On the other hand, design has become a serious discipline, ready to contribute to the formation and, ideally, solution of the urgent problems of the modern world, including the transition to a sustainable society. The scholar notes the diverse roles that design has played throughout its relatively short history, as well as how they are reflected in contemporary design education. Some of these roles include (Held, 2018):

1. The role of the innovator: Design acts as a source of innovation, contributing to the creation of innovative products, services, and solutions. It helps to find new ways to solve problems and meet the needs of society.
2. The role of aesthetics: Design focuses on creating aesthetically pleasing and functional products and environments. It develops the shape, colours, textures, and other elements that contribute to user engagement and satisfaction.
3. The role of the community: Design can serve as a tool to bring people together, create communities, and support social interaction. It promotes the creation of spaces, products, and services that facilitate communication, collaboration, and solidarity.
4. The role of sustainable development: Design can play a key role in developing a sustainable society. It aims to create environmentally friendly and energy-efficient products, promote recycling and reuse of materials, and develop innovative approaches to environmental issues.
5. The role of user interaction: Design puts the needs and expectations of users at the forefront. It focuses on the study of human behaviour and interaction with products and environments to create convenient, intuitive, and enjoyable experiences.

These roles of design are reflected in modern design education and reflect the wide range of tasks and opportunities that it can perform in society. Kwarada et al. (2020) investigated the inception of design education in Japanese elementary schools. Researchers point out that lifelong design education pays special attention to the development of students' creative and innovative skills using design principles and multimedia. In their study, the researchers support the integration of STEAM education, where design is a critical component, into school curricula for primary and secondary school students. STEAM education is an all-encompassing curriculum that integrates the fields of science, technology, engineering, the arts, and mathematics. The objective of STEAM education is to impart a comprehensive and balanced educational experience to students, placing significant emphasis on the practical implementation of knowledge, critical analysis, innovation, and problem-solving. They see the use of multimedia, including programming, as an effective way to promote creativity, problem-solving, and communication skills. This research emphasises the significance of integrating design education into the early stages of education in Japan. Doing so would enable students to cultivate qualities such as innovation, creativity, and teamwork, while also acquiring proficiency in utilising contemporary multimedia technologies (Kwarada et al., 2020).

3.5. Development and transformation of design education in Ukraine: Modern approaches and challenges

Design education in Ukraine emerged in the 1920s and was deeply connected with the development of art education. The Kharkiv School of Art and Industry and other art and industrial schools played a key role in this process. During this period, contemporary educational complexes such as academies, colleges, and institutes proliferated in Ukraine, with the Lviv National Academy of Arts being particularly notable. This has led to a positive trend in their development. Also, in the 20th-century, the speciality “Design” and its various specialisations began to form in various educational institutions, such as The National Academy of Fine Arts and Architecture, Ukrainian National Forestry University, Mykhailo Boichuk Kyiv State Institute of Decorative-Applied Arts and Design. These events contributed to the development of design education in Ukraine and shaped its current state. Between the 1940s and 1960s, higher education institutions were founded in Ukraine to provide education for industrial design professionals. These universities trained the personnel needed for the development of industry. Later, in the 1990s, design departments began to be established based on these higher education institutions. These departments trained and graduated graduate designers in various specialisations at four educational qualification levels (Prusak, 2017). The establishment of design departments during this period was a major step in the development of design education, as they provided proper training for specialists, considering the needs of the labour market and the requirements of the design industry. This development allowed students to choose a specialisation according to their interests and develop in their chosen field of design. Thus, the development of design education in Ukraine has contributed to the development of the country’s creative potential and to meet the demand for highly qualified designers in the labour market. Today, design education in Ukraine is recognised as an important and independent component of artistic education that influences the culture of society. The importance of design as a tool of visual communication and its role in shaping the environment for people is also growing.

Brovchenko (2022) notes that for the development of design education in Ukraine, it is necessary to introduce simple functional subsystems. These subsystems include design-technological (aimed at introducing design into primary, pre-profile, profile, professional (vocational) and higher education), design-art (intended for the introduction of design into primary, pre-profile, profile, professional (vocational) and higher education), cultural and artistic ethno-design (aimed at institutions of higher cultural, artistic, and pedagogical education) and industrial and technological ergonomic design (aimed at institutions of higher technological, technical, and economic education). Each of them has its scope of application in educational institutions of various levels. The implementation of these subsystems will help to create a holistic system of design education in Ukraine and ensure the development of design at various levels of education.

In recent years, there has been a growing interest in modern Internet technologies, their rapid development and effective use in information visualisation. This leads to an increase in the number of professional designers specialising in graphic design for websites. The accumulated practices and access to web design resources allow the creation of websites that reflect distinctive styles of graphic design and interact harmoniously with other graphic objects. Questions arise about the adaptation and interaction of the Internet with other information sources, as well as the definition of a web design style, which is the responsibility of practising designers and art historians (Kachala & Chekh, 2023). Rapid technological advances have changed design education by incorporating educational technologies and transforming it into online education. The transition to online education is necessary and requires pedagogical involvement to ensure a successful transition, both temporarily and permanently. Traditional design education has a “resistant” stance towards online education, and this slows down the understanding and use of connecting possibilities in its discourses. The study reveals the pedagogical concept of meta-connectivity, which gives insight into why and how connectivity is becoming a new challenge for online education.

The paper provides a schematic description of meta-connected design education and highlights the new roles and responsibilities of teachers in this context (Dreamson, 2020). Rapid technological advances and the proliferation of digital devices in education have had a substantial impact on lifelong design education (Kulyk, 2023). Specifically, between 1997 and 2016, there was an increase in the use of online technologies, such as virtual learning environments and virtual reality technologies, in the educational process. Digital devices, such as mobile devices and head-mounted display kits (HMDs), provide students with the opportunity to actively engage in learning, enriching their experience of interacting with the design environment. New immersive technologies allow participants to create a sense of presence in the non-physical world, which helps them learn design concepts more effectively and develop their skills (Radianti et al., 2020). Thus, digital technologies, including virtual reality, are contributing to a change in approaches to continuous design education. They enable students to work with the latest tools and materials, communicate with teachers and like-minded people from around the world, and carry out practical exercises in virtual environments. This contributes to their self-development, professional self-improvement, and the possibility of retraining in new areas of design (Kalashnyk et al., 2020). Digital technologies are being introduced into lifelong design education to provide students with ample opportunities to learn, develop creative skills, and adapt to changes in the design industry. They create new pedagogical approaches, allowing students to actively interact with the design environment and fulfil their potential in this area.

Gamification involves adding game-like elements like interactive features, competition, challenges, and rewards to non-game contexts to engage and motivate people. Using game design principles and mechanics improves task enjoyment, engagement, and interactivity. Gamification has been used in customer engagement, education, marketing, employee development, and healthcare. Notably, modern teachers have positive views on the use of gamification in the educational process, as they perceive gamification as an effective tool for engaging students, improving motivation, and increasing interest in learning. Teachers also believe that gamification can contribute to the development of collaboration, communication, and problem-solving skills in modern design education (Hasanov, 2016; Pektaş & Kepceoglu, 2019). However, it is also worth paying attention to the need for proper design and implementation of gamified elements to achieve maximum pedagogical effect. In continuing design education today, immense importance is attached to the use of visual design or multimedia design technologies. This becomes especially important at the current stage of development of Ukrainian society, when harmonisation of human relations with the environment, including the natural, material, social and artistic environment, becomes one of the key tasks. The professional activity of young specialists requires the ability to interact with the world of art, to understand and creatively use material and spiritual values, and to master the surrounding reality. They affect the subject-spatial environment, giving it aesthetic expressiveness, which requires proper public attention and pedagogical support in forming aesthetic culture in future professionals.

The use of visual design technologies in continuing design education is of foremost importance for the development of students and their preparation for the requirements of modern design. Here are a few ways that demonstrate the use of visual design technologies in lifelong design education:

1. Computer modelling and visualisation: Using specialised software, students can create computer models and visualisations of their designs. This allows them to experiment with shapes, colours, textures, and spatial interactions, get quick feedback, and improve their designs.
2. Graphic software and editors: Students can use graphics programs and editors such as Adobe Photoshop, Illustrator, or Sketch to create and edit graphic elements. This helps them develop skills in working with fonts, colours, composition, and other aspects of graphic design.

3. Web design and development: Modern design education also covers web design and development. Students can learn programming languages such as HTML, CSS, and JavaScript to create websites and interactive designs. They can also use specialised web design software and platforms.

4. Virtual reality and augmented reality: The use of virtual reality (VR) and augmented reality (AR) allows students to experience their designs in an immersive environment. They can visualise their ideas on a real scale, experiment with spatial aspects, and gain new perspectives on their projects.

5. Online resources and learning platforms: There are many online resources and learning platforms on the internet that offer training materials, video tutorials, exercises, and professional advice on visual design. This allows students to learn new techniques on their own, improve their skills and keep abreast of the latest design trends.

In general, the use of visual design technologies in continuing design education contributes to the development of students' creative and technical skills, gives them the opportunity to experiment with ideas and bring their concepts to life. Such approaches help improve the quality of design education and prepare students for the challenges of the modern world.

4. CONCLUSIONS

Design education is essential for creativity, innovation, and technology skills in today's world. It gives students the skills to face real-world professional challenges and allows for self-expression and professional growth. Design education emphasises continuity. Education becomes a lifelong process of self-improvement and learning, not just academic years. In today's world, where technology is constantly changing, career skills must be adaptable and improved.

Design education lets students study graphic, web, and industrial design. It fosters creativity, observation, analysis, and communication. Students learn to design functional, attractive solutions that meet user needs. Modern multimedia technologies are crucial to design education. Students can experiment, visualise, communicate, and collaborate with other students and professionals from different fields. Computer modelling, graphics software, virtual reality, and other innovative technologies enable interactive projects, virtual prototypes, and creative process. Continuing design education gives students the latest design knowledge and trends. It involves updating curricula, working with professionals, and learning from real cases and projects. This prepares students for real-world challenges by providing practical experience. This emphasises the importance of design education today. Students develop creative and technical skills, as well as personal growth and adaptability. Design education is essential to modern education because it fosters self-expression, innovation, and professional growth. The current terminology, concept, and effectiveness of lifelong design education were examined in this study. The study also highlighted global and Ukrainian design education issues. This study examined visual design technologies in design education. Modern visual design technologies can improve educational quality and efficiency. Current design education opinions were examined in this study, reflecting field trends. Modern design education is expanding beyond traditional teaching methods. The study found that Ukraine is developing secondary and higher design education. Modern education, influenced by European integration, is being developed in this context.

Future researchers should examine how modern technologies affect students' creative, critical, and professional development in design education. Researchers may also analyse innovative teaching methods and find the best ones. A major research area could be how visual design affects student motivation and interest in learning.

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Reference According to APA Style, 7th edition:

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Case Report

DOI: 10.53681/c1514225187514391s.34.265

EL ASOCIACIONISMO EN LA EDUCACIÓN MUSICAL: EL CASO DE SEM-EE, LA SOCIEDAD PARA LA EDUCACIÓN MUSICAL DEL ESTADO ESPAÑOL

Associationism in music education: the case of SEM-EE, the Society for Musical Education of the Spanish State

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RESUMEN

La actividad y el trabajo colaborativo que se realiza desde las asociaciones de educación musical (AEM) pueden convertirse en un gran apoyo e impulso para el avance de la enseñanza de la música, sin embargo, no constan estudios que lo demuestren en el entorno español. Por ello, el objetivo de este artículo, es explorar el caso de la Sociedad para la Educación Musical del Estado Español (SEM-EE), a través de la percepción de los conocedores de la SEM-EE, en cuanto a la utilidad que ha tenido para ellos la asociación en el desarrollo de su trayectoria profesional docente, el valor considerado al formar parte de la organización, y la repercusión de las acciones de esta entidad en la educación musical española. Para ello, se aplicó un cuestionario diseñado ad hoc a una muestra de 53 conocedores de SEM-EE. Los resultados indican que las valoraciones respecto a las aportaciones de la SEM-EE son mayormente positivas, contribuyendo a la promoción y desarrollo de la educación e investigación musical en general, y al incremento de la implicación y el compromiso de los docentes en este ámbito educativo. Estos datos deberían ser tenidos en cuenta para fomentar la membresía y el mantenimiento de las AEM que trabajen en el avance de la educación y la investigación musical.

PALABRAS CLAVE

Asociacionismo, educación musical española, investigación musical, trabajo colaborativo, SEM-EE.

ABSTRACT

The activity and collaborative work carried out by music education associations (AEM) can become a great support and impetus for the advancement of music teaching, however, there are no studies that demonstrate this in the Spanish environment. Therefore, the objective of this article is to explore the case of the Society for Musical Education of the Spanish State (SEM-EE), through the perception of those who know the SEM-EE, regarding the usefulness that this association has had for them in the development of their professional teaching career, the value given to being part of the organization society, and the impact of the entity actions on Spanish music education. To this end, a questionnaire designed ad hoc was applied to a sample of 53 SEM-EE experts. The results indicate that the evaluations regarding the contributions of the SEM-EE are mostly positive, encouraging the promotion and the development of musical education and research in general, and the increase in the involvement and commitment of teachers in this educational field. These data should be taken into account to promote membership and maintenance of AEMs that work to advance music education and research.

KEYWORDS

Associationism, Spanish musical education, music research, collaborative work, SEM-EE.

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Submission date:

16/01/2024

Acceptance date:

05/10/2024

1. INTRODUCCIÓN

El asociacionismo enfocado a la educación, la investigación y la práctica musical, ha constituido siempre un pilar fundamental para la evolución de nuestra cultura musical. Como apuntan Porta y Morant (2019), el asociacionismo musical constituye un elemento expresivo y manifestación humana de máximo nivel, y la música, tiene presencia en la actividad humana de múltiples maneras, siendo una de ella la expresión colectiva de grupos, personas, sentimientos y acciones humanas. Si ahondamos en el concepto de asociación, esta se define según el Diccionario panhispánico del español jurídico, como una “organización dotada de personalidad jurídica integrada por una diversidad de personas, físicas o jurídicas, que, mediante un pacto asociativo, se dedica de forma permanente a la consecución de determinados fines sin finalidad de lucro”, y su legislación está reglamentada por la *Ley 1/2002, de 22 de marzo, reguladora del derecho de asociación* (BOE, 2002). Esta definición coincide con el perfil de la sociedad que es objeto de estudio en este artículo, como paradigma de trabajo colaborativo que potencia la capacidad de los individuos y organizaciones para trabajar juntos de manera efectiva, promoviendo el aprendizaje musical y la difusión de la música en la sociedad. Así, es clave disponer de grupos de trabajo cooperativos en los ámbitos de la educación musical que colaboren para impulsar la enseñanza musical, teniendo además en cuenta que las actividades asociativas, crean eficacia en la interacción y la proactividad de sus miembros (Jaramillo-Valencia y Quintero-Arrubla, 2021).

La *Sociedad para la Educación Musical del Estado Español* (SEM-EE) [1], es una Asociación de Educación Musical (AEM) que se ha dedicado, durante casi medio siglo, a reunir profesionales de la música y a trabajar con ellos para mejorar y avanzar en la educación musical española en sus diferentes ámbitos. Nació en 1977 como filial colaboradora en España de la *International Society of Music Education* (ISME), institución que se gestó en 1953 en Bruselas (McCarthy, 2004), y que es la única entidad en el mundo reconocida por la UNESCO en materia de Educación Musical. La ISME alberga hoy cerca de 80 países miembros, y “está considerada como una familia universal de educadores musicales, acogedora de todas las culturas y de todas las músicas” (Thönnell, 2003 p.41). La ISME y la SEM-EE comparten los mismos ideales y objetivos, y albergan su razón de ser en la contribución permanente al avance de la educación musical, a nivel internacional y nacional respectivamente. Sin embargo, SEM-EE es una gran desconocida en cuanto a su trayectoria, sus beneficios o su alcance. Existen trabajos que han abordado el estudio de las aportaciones y de la historia de asociaciones similares (Kim, 2020), considerando su análisis como una fuente valiosa para la sociedad y para el crecimiento de la educación musical futura; y proyectos que han partido de las AEM para estudiar diferentes parámetros educativos, como los estudios desarrollados por Boeckman (2002), Brophy (2011), Greene et al. (2020), o Clauhs y Sanguinetti (2022), todos ellos desarrollados en el ámbito estadounidense; pero no se encuentran investigaciones que analicen los beneficios de las asociaciones de educación musical en el ámbito español. Por ello, el propósito de este trabajo es averiguar, a través de la percepción de los conocedores de la SEM-EE, la utilidad que ha tenido la asociación en el desarrollo de su trayectoria profesional docente, el valor concedido a formar parte de la institución, y su repercusión en la educación musical española, con el fin de dar un primer paso en el análisis del trabajo colaborativo de SEM-EE con la comunidad educativo musical.

2. ESTADO DEL ARTE EN EL ÁMBITO INTERNACIONAL

Algunos de los fines del asociacionismo de educación musical en el ámbito internacional han estado enfocados a aspectos como la contribución en la elección de la especialidad a los futuros docentes de música (Councill et al., 2013); el fomento del desarrollo profesional de los educadores musicales, mejorando las oportunidades para los estudiantes (Sanz, 2019); o el impulso de la práctica musical de adultos, con su consecuente bienestar físico, cognitivo, social y

emocional (Coffman, 2009). Es evidente que las asociaciones de educación musical constituyen un foco para la investigación educativa, y así lo revelan trabajos como el de Boeckman (2002), quien examinó tendencias de inflación o deflación de calificaciones a partir del Festival de Bandas de la Asociación de Educación Musical de Ohio (OMEA); el de Clauhs y Sanguinetti (2020), quienes estudiaron las actitudes y los valores de los docentes neoyorquinos respecto a la inclusión de la música popular en las aulas, mediante encuestas a miembros de las AEM; o el de Potter (2023), quien encuestó a miembros de la Asociación de Educación Musical de Tennessee, para investigar las percepciones sobre evaluaciones basadas en portafolios de los maestros de música de dicho estado. Asimismo, la Asociación Nacional para la Educación Musical de Estados Unidos (NAFME) [2], que engloba a su vez asociaciones en cada estado norteamericano, implantó programas para tutorizar y preparar a futuros profesores de música de todo el país, un proyecto cuya creación justificó Baumgartner (2020), con un informe basado en entrevistas, documentos y encuestas a sus socios participantes, o cuyas bases y necesidades fueron examinadas por Greene et al. (2020). Autores como Vaughan-Marra y Baumgartner (2023), también revisaron y analizaron a fondo estos programas para detectar las necesidades de los mismos y mejorarlos, y la NAFME fue asimismo examinada, como estudio de caso, por Shieh (2012), quien la consideró una entidad fundamental y necesaria para la renovación del currículo desde la agencia de profesores de música.

Más allá de los trabajos de investigación realizados desde esta red de asociaciones de educación musical de Estados Unidos, en Corea del Sur se llevó a cabo una investigación sobre la Sociedad Coreana de Educación Musical (Kim, 2020), la primera asociación de educación musical de este país, fundada en 1956. El trabajo se realizó a partir de 3 entrevistas a personalidades que contribuyeron al desarrollo de la misma, en busca de datos sobre la historia de dicha sociedad, y se consideró una importante aportación para la educación musical futura. También es necesario destacar las investigaciones derivadas de la asociación internacional ISME: además del libro sobre la historia de ISME escrito por McCarthy (2004), existen numerosos trabajos sobre las aportaciones de esta sociedad a la educación musical, entre ellos el realizado por Elliot (2004), quien trató cuestiones clave de la educación musical en ISME durante 50 años; Brown (2009), el cual esbozó un estudio de caso en el contexto universitario australiano sobre el uso de la escritura reflexiva de diarios como herramienta curricular para los estudiantes de música, a raíz de la Comisión ISME para la Educación del Músico Profesional (CEPROM); Price et al. (2010), quienes examinaron el alcance internacional de los trabajos de los seminarios de la Comisión de Investigación de la ISME entre 1988 y 2006; Papatzikis (2019), quien analizó el impacto en Dubái y Oriente Medio del 27º Seminario de la Comisión de Investigación de ISME; y Orman y Frega (2023), los cuales estudiaron los trabajos de las Comisiones de investigación de ISME realizados entre 1968 y 2018, concluyendo en la necesidad pasada, presente y futura de esta organización como AEM internacional. Este tipo de asociaciones ha generado hasta ahora múltiples beneficios en los diferentes ámbitos educativos de sus países, y han supuesto un foco para las investigaciones enfocadas en la mejora de la actividad y la calidad de la educación musical.

3. EVOLUCIÓN DEL ASOCIACIONISMO MUSICAL EN ESPAÑA

El asociacionismo musical en España tiene sus orígenes en el siglo XIX con las sociedades musicales, y adquiere una gran importancia en la vida intelectual del romanticismo, transformando la vida musical española (Casares, 2001). Tras la Guerra de Independencia contra Francia, a principios del XIX, y con una situación política y social en España inestable, surgió la iniciativa de promover y desarrollar la música como entretenimiento y aprendizaje, dando lugar a asociaciones de músicos y profesores de música y generando el formato de “sociedad musical”. La Real Orden Circular de 1839, que liberalizaba el derecho de asociación, impulsó la creación de sociedades, ateneos, liceos e instituciones diversas en Madrid y Barcelona, lugares elitistas de socialización para la burguesía, en los que se realizaban diversas actividades musicales -talleres, conciertos, formación musical-, y que por mimesis se fueron extendiendo por todo el

país (Cortizo y Sobrino, 2001). Como afirman Queipo y Palacios (2019), este fue el caldo de cultivo en el que nacieron las primeras asociaciones como la Sociedad Coral de Bilbao (1844), la Sociedad de Conciertos de Madrid (1866), la Sociedad Artística Musical de Valencia (1874) o la Sociedad Filarmónica de Barcelona (1894). Este formato de asociación, con el propósito inicial de mejorar la calidad de la enseñanza musical y de promover el desarrollo de la música como disciplina artística, se fue extendiendo por toda la península, convirtiéndose a finales del siglo XIX en una parte muy importante de la vida cultural de los españoles. A comienzos del siglo XX, se había extendido la fiebre asociacionista en España, y por otra parte se vivía una evolución musical muy rápida y activa, pero tras la posguerra, España sufrió un bloqueo importante en los ámbitos social y artístico, que, sumado al aislamiento europeo por la segunda guerra mundial, supuso un gran bache económico y cultural en todo el país, además de un gran retroceso en la actividad musical española (Sartorius y Alfaya, 2002). Así, en la década de 1920, surgió en España un movimiento pedagógico conocido como la Escuela Nueva, que promovía una educación más activa y participativa para los estudiantes. En este contexto, surgieron varias asociaciones de educadores musicales que se inspiraron en estos principios, como la Asociación de Profesores de Solfeo y Canto Coral en 1922 o la Asociación de Profesores de Educación Musical en 1928. Y en la década de 1930, con el advenimiento de la Segunda República española, las sociedades musicales experimentaron un nuevo auge. En este período, se crearon nuevas organizaciones que se centraron en la promoción de la música moderna y experimental, y que abogaron por una mayor democratización en la vida cultural del país. A partir de la década de 1960, surgieron nuevas asociaciones de músicos y educadores que buscaron renovar la enseñanza de la música en España, como la Asociación de Músicos Contemporáneos de España (1961), que conformarían en 1968 la Federación de Sociedades Musicales de la Comunidad valenciana (FSCMV) [3] y la Asociación Española de Educación Musical (1975). No fue hasta la década de los 70, con el establecimiento de la democracia, cuando sucedió un gran avance social, económico y artístico que tendría repercusiones muy positivas para el ámbito musical, apoyado en principio por el Ministerio de Cultura, y posteriormente por las propias Comunidades Autónomas (Pliego, 2013). Fue en esta década cuando nació la SEM-EE, bajo el nombre inicial de ISME-España, como pionera española del asociacionismo dedicado de lleno a la educación musical. Sin embargo, el devenir de este proyecto iniciado no fue tarea fácil, pues hasta finales de siglo XX, convivió en España una desidia nacional generalizada hacia la enseñanza de la música, cuya práctica era muy escasa e iba muy retrasada con respecto a Europa y a Estados Unidos (Lorenzo, 2022). A partir de los años 90 se produjo una evolución progresiva en cuanto a la importancia de la música en la educación general, que coincidiría con el incremento de la actividad asociacionista (Salamon, 1994). Esta evolución favoreció sin duda la continuidad de SEM-EE, cuya actividad se ha mantenido hasta la actualidad, contribuyendo a un entorno más inclusivo, diverso y culturalmente rico.

4. MÉTODO

4.1. Diseño y muestra

Para la consecución de los objetivos, se ha utilizado una metodología cuantitativa, descriptiva y de diseño exploratorio, mediante la administración de un cuestionario que sondea la utilidad que ha tenido la SEM-EE en el desarrollo de su trayectoria profesional docente, el valor concedido a formar parte de la sociedad, y su repercusión en la educación musical. La muestra invitada para este estudio fue de 200 participantes, conocedores de SEM-EE, que hubieran contactado o colaborado en algún momento de su vida con la asociación, de los cuales aceptaron contestar un total de 53 personas, siendo esta la muestra participante final. La selección de la muestra se hizo por conveniencia, con aquellos encuestados a los que se pudo tener acceso de forma aleatoria no probabilística (Latorre et al., 2021). En cuanto al sexo y edad de la muestra, las respuestas fueron emitidas por un 54,7% de hombres ($n = 29$) y un 45,8% de mujeres ($n = 24$), de 21 años en adelante, de los cuales un 62,3% pertenecía a la franja de edad entre 41 y 60 años (Fig. 1).

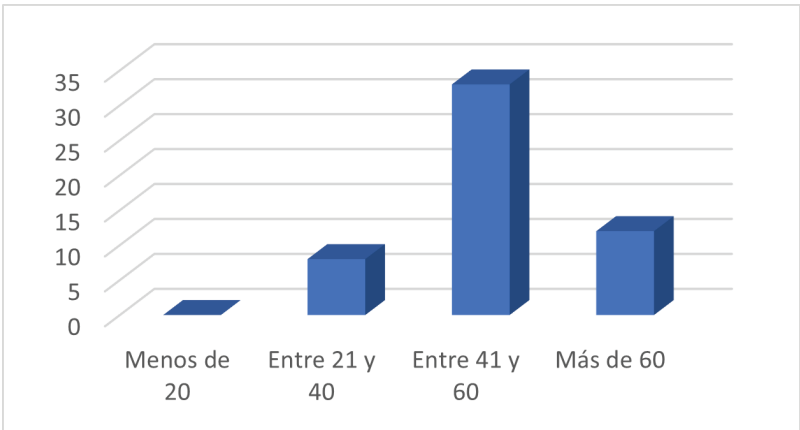


Fig. 1
Edad de los encuestados.

4.2. Instrumento

Como instrumento, para la recogida de datos, se diseñó un cuestionario elaborado *ad hoc*, a través de la herramienta *Google Form*, el cual fue validado por un juicio de expertos, compuesto por 6 académicos del campo de la Educación Musical, procedentes de varias universidades y conservatorios españoles, cuyas recomendaciones de mejora fueron aplicadas para elaborar la versión final. El cuestionario estaba compuesto por un total de 25 ítems distribuidos en 4 bloques: datos sociodemográficos; participación en la SEM-EE; aportaciones de SEM-EE en la trayectoria profesional docente; y contribución de SEM-EE en la educación e investigación musical española (Tab. 1). Estos ítems se corresponden con preguntas de respuesta binaria (sí - no), preguntas - respuesta tipo Escala Likert con 5 alternativas de respuesta (nada - poco - moderado - bastante - mucho), preguntas con respuestas de rango temporal, y cuestiones con respuestas cerradas alternativas.

Datos sociodemográficos	Edad
	Sexo
	Formación musical
	Ámbito de trabajo
	Años de docencia
Participación en SEM-EE	Años conociendo SEM-EE
	Años siendo socio de SEM-EE
	Grado de importancia otorgado al asociacionismo
	Tipo de actividades hechas con SEM-EE
Aportación de SEM-EE a la trayectoria docente	Actividades de formación permanente
	Tecnología digital en el aula
	Nuevos recursos didácticos
	Metodologías pedagogía musical
	Compromiso con la educación musical
	Ampliación de formación y titulación
	Autocrítica del desempeño profesional

Tab. 1
Preguntas del cuestionario aplicado.
(Fuente: elaboración propia).

Tab. 1 (continuación)

Preguntas del cuestionario aplicado.

(Fuente: elaboración propia).

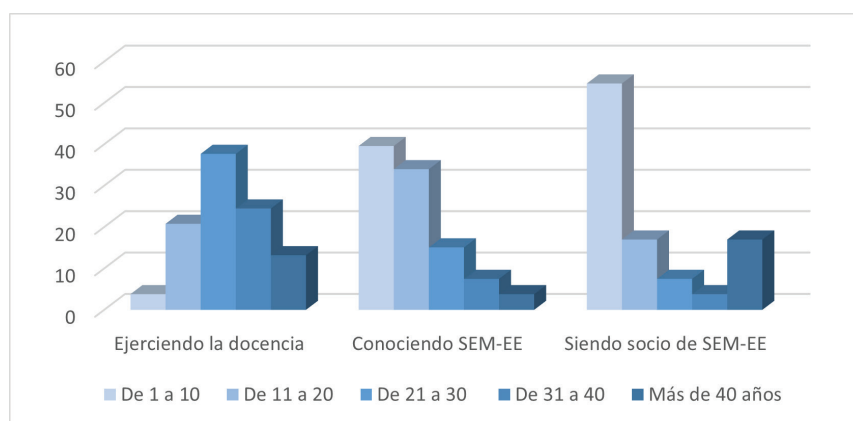
Contribución de SEM-EE a la educación musical	Congresos, talleres, cursos...
	Contacto entre músicos profesionales
	Intercambio de experiencias en foros
	Perfeccionamiento de la formación del profesorado
	Actualización de la pedagogía y la didáctica musical
	Cooperación con otras instituciones
	Información permanente sobre el estado de la educación musical
	Convenios de colaboración con otras instituciones
	Defensa del derecho del individuo a la educación musical

4.3. Procedimiento

En cuanto al procedimiento de toma de datos, se envió el cuestionario de forma *online* a socios y colaboradores de la sociedad, a través de correos personales y redes sociales. La recopilación de los datos se realizó entre los meses de marzo a octubre de 2023. El cuestionario incluía una breve descripción previa sobre la intención de la investigación y sobre el carácter anónimo del mismo, así como un indicativo sobre el tiempo que implicaría su realización. Para el análisis de los datos se utilizó el programa SPSS 29.0, mediante el cual se calculó la estadística descriptiva; y los gráficos para la presentación de la información se realizaron a través del programa Excel.

5. RESULTADOS

La información recogida mostró que el 62,2% de los encuestados llevaba ejerciendo la docencia entre 21 y 40 años, un 13,2% durante más de 40 años, y el 96,2% de todos los casos durante más de 10 años. Tan solo un 3,8% serían profesionales con una experiencia más novel, entre 1 y 10 años. Asimismo, del total de encuestados, un 73,6% conoció SEM-EE en la franja de los últimos 20 años, y un 71,7% se asoció en el mismo periodo. En los gráficos expuestos a continuación (Fig. 2), se observa cómo ha ido subiendo progresivamente la popularidad de la sociedad, y cómo la captación de socios se ha elevado más intensamente en la última década.

**Fig. 2**

Años de docencia y de membresía/contacto con SEM-EE.

En cuanto a la formación musical de los encuestados, se observó que la mayoría (79,2%), habían estudiado en conservatorios superiores, el 15,1% eran titulados universitarios, y el

5,7% formados en escuela de música privada, pública o concertada. Respecto al ámbito laboral, el 49,1% trabajaban en conservatorio —el 34% en conservatorio superior y el 15,1% en conservatorio profesional—, el 35,8% trabajaban en la universidad, el 7,5% en escuela de música, el 5,7% en educación secundaria, y el 1,9% en educación infantil y primaria (Fig. 3).

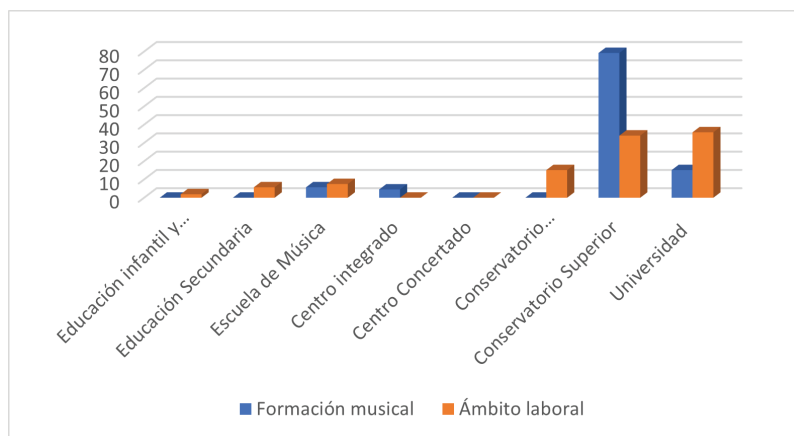


Fig. 3
Formación musical y ámbito laboral de los encuestados.

En relación con la importancia de ser miembro de alguna sociedad de educación musical, un 79,1% de los encuestados manifestó considerarlo entre “bastante” (47,2%) y “muy” (32,1%) importante. Y en cuanto a la valoración de estar asociado a SEM-EE, el 64,1% le otorgó entre “bastante” (22,6%) y “mucho” (41%) relevancia. Por último, un 68% otorgó

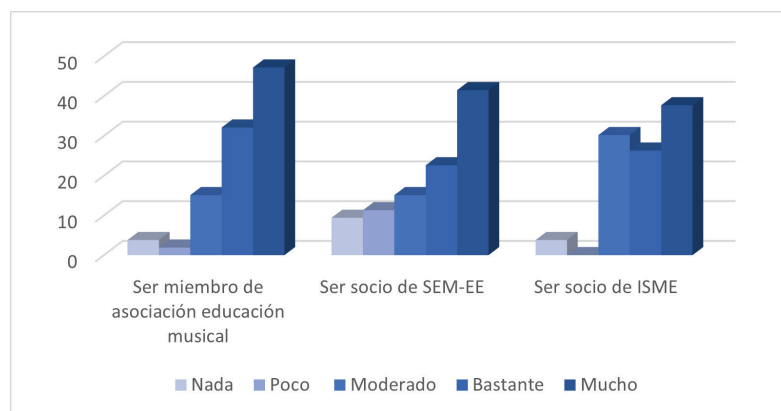


Fig. 4
Grado de importancia otorgado al asociacionismo.

entre “mucho” (37,7%) y “bastante” (28,3%) importancia a ser socio de ISME (Fig. 4). Las actividades mas realizadas por los encuestados con la SEM-EE fueron congresos, jornadas y encuentros (37,3%), y las menos experimentadas (5,9%), las reuniones con expertos de educación musical. En cuanto al resto de ítems, destacó una media de participación en torno al 14% en cursos, jornadas, talleres, publicaciones, y asambleas generales de SEM-EE, y un 11,14% en comisiones de investigación (Fig. 5).

Las percepciones recibidas por los participantes, indicaron que SEM-EE había contribuido en su trayectoria profesional docente, y en la mejora de algunos aspectos competenciales, especialmente por este orden —los porcentajes indican la suma de los parámetros “bastante” y “mucho” de cada ítem—: en la implicación y el compromiso con la educación y la investigación musical (62,3%), en la motivación para llevar a cabo más titulaciones y formación (56,6%), en la autocrítica del desempeño profesional (56,6%), y en la participación en actividades de formación y renovación permanente del ámbito de la educación musical (54,7%). Sin embargo, la contribución de SEM-EE en cuanto al uso de la tecnología digital, fue considerada escasa: el 62,2% indicaron para este ítem “poco” o “nada”, y hubo una respuesta moderada en cuanto al uso y conocimiento de nuevos recursos didácticos y a la aplicación de metodologías tradicionales e innovadoras en la pedagogía musical (Fig. 6).



Fig. 5
Actividades realizadas por los encuestados.

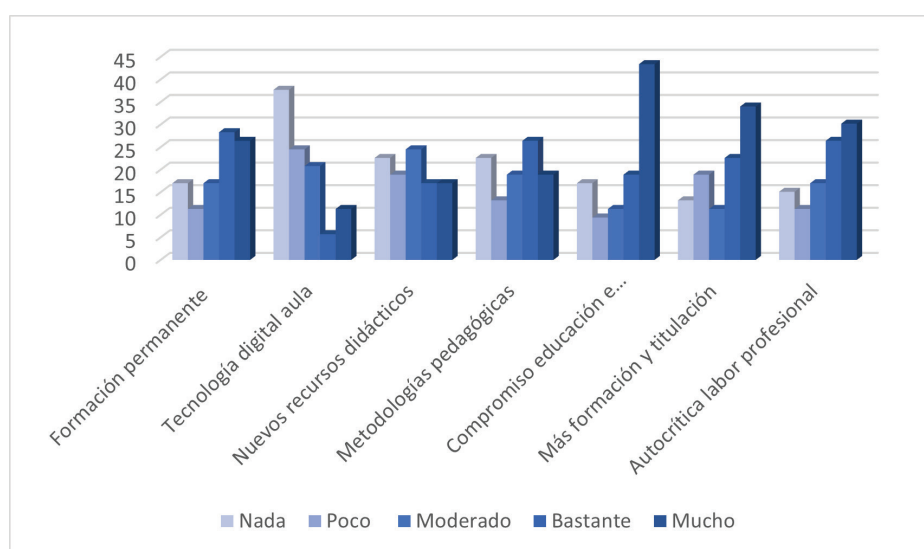


Fig. 6
Aportaciones de SEM-EE en las trayectorias profesionales docentes.

Por último, como se puede observar en la figura 7, en cuanto a la contribución de SEM-EE a la educación musical española, la acción más valorada (67,9%) –porcentajes como suma de las percepciones “bastante” y “mucho”–, fue la referida al intercambio y difusión de trabajos, experiencias y opiniones sobre educación e investigación musical, en foros de debate, seguida de la acción de promoción y desarrollo de la educación e investigación musical a través de congresos, encuentros, seminarios, jornadas, talleres, cursos, conferencias, y publicaciones (66%). La tercera acción más valorada fue la actualización y promoción de la pedagogía y didáctica de la música (60,4%), y en cuarto lugar se situó la defensa del derecho del individuo a la educación musical (58,4%). Siguiendo ese orden, las contribuciones a la educación musical más valoradas fueron los convenios de colaboración con la administración para el profesorado (56,6%), la información permanente sobre el estado de la educación musical española en sus diferentes ámbitos (54,7%), y la cooperación de instituciones y organizaciones con interés en SEM-EE. En último lugar, se valoraron las acciones de SEM-EE referidas al perfeccionamiento de la formación del profesorado de todos los ámbitos de la educación musical, y al enlace de contacto entre los músicos profesionales docentes españoles y entidades de otros países o de la ISME internacional (ambas 49,1%).

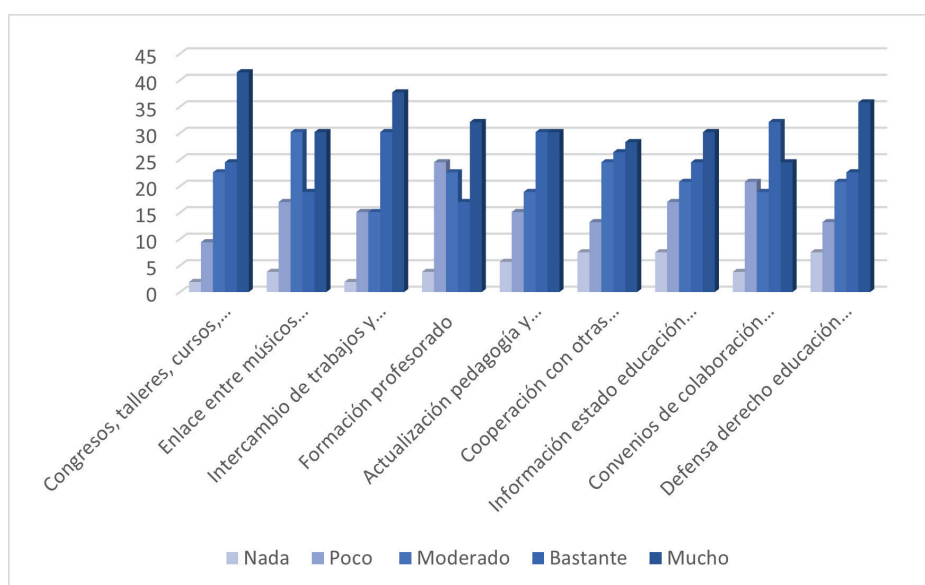


Fig. 7
Contribuciones de SEM-EE
en el avance de la educación e
investigación musical española
a través de sus acciones y
actividades.

6. DISCUSIÓN Y CONCLUSIÓN

El asociacionismo en educación musical es crucial para fomentar el aprendizaje colaborativo, el intercambio de ideas, las habilidades sociales, el conocimiento de nuevas corrientes pedagógicas o didácticas, y el desarrollo profesional. En este sentido, McCarthy et al. (2020), a partir de la evidencia, identifican la colaboración, la continuidad y la comunidad como fortalezas del grupo y como desafíos de los miembros del mismo. Estas características se alinean con las percepciones recogidas en este estudio, sobre las acciones llevadas a cabo por SEM-EE en el ámbito del asociacionismo musical español, traducidas principalmente en el intercambio de trabajos y experiencias en educación e investigación musical, la promoción y el desarrollo de la investigación musical, la interconexión o enlace entre profesionales del ámbito, y las actividades celebradas para todo ello: congresos, talleres, cursos, jornadas, etc. Tales resultados denotan una influencia favorable de la SEM-EE en la carrera de los docentes encuestados, y, por tanto, una repercusión positiva en su desarrollo profesional. Sin embargo, aspectos menos valorados como el trabajo tecnológico digital, o la actualización y promoción de la pedagogía y de la didáctica musical, se revelaron como áreas a reforzar en las actividades de la asociación, planteando retos como la adaptación de métodos y recursos a la era digital, la formación virtual o el uso de nuevas tecnologías para la enseñanza y la difusión de la música. La exploración realizada también evidencia una participación reducida respecto de los contactos facilitados por la propia asociación, de los cuales tan solo brindaron su colaboración una cuarta parte del total. La captación de socios y participación se refleja, por tanto, como uno de los mayores desafíos de SEM-EE, a pesar de la opinión favorable otorgada por los encuestados sobre su interés en participar en la actividad asociacionista. Así, se infiere una alta valoración en cuanto a ser socios de SEM-EE, de ISME, o de alguna otra sociedad de educación musical, pero sin embargo se detecta una importante necesidad de mayor membresía.

En cuanto a las aportaciones de SEM-EE en el desarrollo profesional de sus colaboradores, se desprende de este análisis la implicación y el compromiso con la educación y la investigación musical de los participantes, la motivación para seguir ampliando su formación y titulación, y el fomento de la mentalidad autocrítica en el desempeño laboral. En este sentido, Sanz (2019), coincide al destacar el compromiso que genera la Asociación Nacional de Educadores Musicales (NAfME), con los educadores musicales y partidarios de la educación musical, que buscan mejorar la condición general de una institución musical. Este interés se alinea a su vez con las valoraciones de inercia positiva recogidas por medio del cuestionario, en cuanto a los beneficios aportados por la SEM-EE a sus participantes, reforzando, por tanto,

la hipótesis inicial sobre el impulso que puede suponer para el avance de la educación musical de un país, la actividad y el trabajo colaborativo que se realiza desde las AEM. En general, todas las acciones de SEM-EE fueron valoradas positivamente como contribuciones decisivas para el avance de la educación musical en España. Sin embargo, el perfil de los encuestados destacó por una formación musical eminentemente de conservatorios superiores de música, y el ámbito laboral de los mismos se detectó mayormente en universidades, conservatorios superiores y conservatorios profesionales de música, lo cual brinda una idea del perfil del usuario más habitual de la SEM-EE: docentes con formación musical superior, empleados en enseñanzas profesionales y superiores de música de conservatorios y universidades. Este dato nos conduce a otro posible desafío para la asociación en cuanto a la inclusión de perfiles de todos los ámbitos de la educación musical, reflexión reforzada por Shieh (2012) y Sanz (2019), quienes apuestan por la conveniencia de crear y de mantener la existencia y el funcionamiento de las AEM que incentiven y promuevan, con su trabajo y dedicación, el avance de la educación y la investigación musical en todos sus ámbitos. A través de las AEM, los miembros o participantes pueden compartir experiencias, recibir retroalimentación y fortalecer su valoración por la educación musical de manera colectiva, lo que contribuye a un crecimiento más integral y enriquecedor en el ámbito de la educación musical (Baumgartner, 2020; Greene et al., 2020). Este tipo de asociaciones ha generado hasta ahora múltiples aclaraciones y beneficios en los diferentes entornos educativos de los países que las albergan. Además, el asociacionismo en educación musical ha supuesto un foco para las investigaciones y trabajos enfocados en la mejora de la calidad de la enseñanza de la música y de sus recursos y herramientas, especialmente fuera de España. Este estudio exploratorio no constituye una base sólida en cuanto al funcionamiento de SEM-EE, pero ha permitido conocer debilidades y fortalezas de una sociedad española dedicada a la educación musical desde el trabajo colaborativo, que proporciona avances en el desarrollo profesional y en la educación musical general, y que promueve la defensa de los derechos de los músicos profesionales, y ayuda a visibilizar y abordar las barreras a las que se enfrentan. Los resultados pueden conducir a reforzar las áreas menos trabajadas, y a reconocer sus logros y contribuciones, motivando a otros a seguir esfuerzos similares para mejorar la educación. Asimismo, pueden corroborar la conveniencia de que se apoye la existencia y el mantenimiento de aquellas AEM que incentiven y promuevan el avance de la educación y la investigación musical. A pesar de las limitaciones del estudio, respecto al tamaño de la muestra y a la subjetividad que comporta la recogida de opiniones, abre un camino para profundizar en esta u otras investigaciones similares futuras.

NOTAS

[1] <https://www.sem-ee.com/>

[2] <https://nafme.org/>

[3] <https://fsmcv.org/>

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Reference According to APA Style, 7th edition:

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Case Report

DOI: 10.53681/c1514225187514391s.34.270

HARMONIZING THE MIND: EXPLORING THE PSYCHOLOGICAL IMPACT OF VOCAL THERAPY ON MUSIC UNIVERSITY STUDENTS

Harmonizando a mente: Explorando o impacto psicológico da terapia vocal em estudantes universitários de música

ABSTRACT

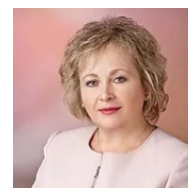
We consider mental health as a fundamental human value, the state of which must be maintained throughout university education. This study delves into the psychological effects of vocal therapy on university music students, addressing a gap in research on targeted mental health interventions for this group. Amidst the unique pressures of music education, this research examines how vocal therapy can aid in emotional release and personal expression, potentially influencing students' coping strategies, social connectedness, mental health, and overall resilience. Coping strategies and social connectedness are key factors that ensure students' resilience to various life challenges and stresses. Developing and maintaining these aspects of mental health not only helps students cope with current tasks and problems but also lays the foundation for their successful adaptation and growth in the future. We have employed the following validated instruments: Kenny Music Performance Anxiety Inventory (K-MPAI), Short Form-36 (SF-36), UCLA Loneliness Scale, Coping Inventory for Stressful Situations (CISS), and the Connor-Davidson Resilience Scale (CD-RISC). The study compares students undergoing vocal therapy with those who are not. These findings underscore the efficacy of vocal therapy as a comprehensive intervention, advocating for its integration into university mental health services. This study contributes to the growing field of music therapy and mental health, offering essential insights for educational institutions, mental health professionals, and music educators.

RESUMO

Consideramos a saúde mental um valor humano fundamental, cujo estado deve ser mantido durante todo o ensino universitário. Este estudo investiga os efeitos psicológicos da terapia vocal em estudantes universitários de música, abordando uma lacuna na pesquisa sobre intervenções de saúde mental direcionadas para este grupo. Em meio às pressões únicas da educação musical, esta pesquisa examina como a terapia vocal pode ajudar na liberação emocional e na expressão pessoal, influenciando potencialmente as estratégias de enfrentamento dos alunos, a conexão social, a saúde mental e a resiliência geral. As estratégias de enfrentamento e a conexão social são fatores-chave que garantem a resiliência dos alunos aos vários desafios e tensões da vida. Desenvolver e manter estes aspectos da saúde mental não só ajuda os alunos a lidar com as tarefas e problemas actuais, mas também estabelece as bases para a sua adaptação e crescimento bem-sucedidos no futuro. Empregamos os seguintes instrumentos validados: Kenny Music Performance Anxiety Inventory (K-MPAI), Short Form-36 (SF-36), UCLA Loneliness Scale, Coping Inventory for Stressful Situations (CISS) e Connor-Davidson Resilience Scale (CD-RISC). O estudo compara estudantes em terapia vocal com aqueles que não o fazem. Estes resultados sublinham a eficácia da terapia vocal como uma intervenção abrangente, defendendo a sua integração nos serviços universitários de saúde mental. Este estudo contribui para o crescente campo da musicoterapia e saúde mental, oferecendo insights essenciais para instituições educacionais, profissionais de saúde mental e educadores musicais.

Submission date:
05/03/2024
Acceptance date:
11/06/2024

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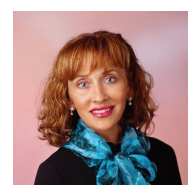
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KEYWORDS

coping strategies, social connectedness, mental health, resilience, music education, vocal therapy.

PALAVRAS-CHAVE

estratégias de enfrentamento, conexão social, saúde mental, resiliência, educação musical, terapia vocal.

1. INTRODUCTION

The impact of neuropsychological and neurobiological foundations of vocal music, especially singing, involves complex interplays between neural circuits and cognitive and emotional processes. Recent research by Toader et al. (2023) has illuminated these intricate mechanisms, underscoring the profound influence of music on human emotion, cognition, and social interaction. The study also revealed how music not only enhanced cognitive abilities (e.g., memory and attention) but also offered therapeutic benefits for depression, anxiety, and stroke recovery. Advanced neuroimaging is used to map the brain areas that are activated by music, providing insights into its role in emotional and cognitive regulation. Nguyen et al. (2023) suggested that music represented an early-developing, accessible form of interpersonal communication and advocated for research employing dynamic, naturalistic social interactions to deepen the understanding of music communicative potential. Almeida et al. (2015) discovered that fast music (140 beats per minute) increases perceived exertion and enhances walking performance, suggesting music potent influence on physical activity without significantly affecting physiological or emotional states.

Music therapy has shown promise for patients with various neurological conditions, such as dementia and depression. For instance, rhythmic music can stimulate brain circuits in people with Parkinson's disease, aiding physical movement (Mateos-Moreno & Erlanson, 2023). Music activates many different parts of the brain, including the temporal lobe, cerebellum, amygdala, and hippocampus. These areas are involved in processing tone, pitch, rhythm, timing, emotions, and memories. Additionally, various parts of the brain's reward system are activated by music, underlining the comprehensive impact of music on the human brain (Mateos-Moreno & Erlanson, 2023). The current study aims to explore the psychological impacts of vocal therapy among university music students. Specifically, it investigates how vocal therapy, as a subset of music therapy that uses the human voice as a therapeutic tool, can aid in students' coping strategies, social connectedness, mental health, and overall resilience. University students, especially those pursuing music-related degrees, encounter a range of psychological challenges during their academic journey. Music students may encounter more psychological challenges compared to their peers in other disciplines, evidence supports this statement (Lunov et al., 2022). According to Rosset et al. (2022), music students face unique demands, with many practicing almost 3 hours daily. This intense regime, particularly among first-year students and those specializing in string instruments, leads to prevalent shoulder and back pain.

Furthermore, the study highlighted that while performance majors generally demonstrated better awareness of health risks and possessed stronger coping strategies than music education majors, there was a notable decline in mental health status from the beginning to the end of the second semester. Thus, music students' specific pressures and physical demands affected their physical and mental health, thereby supporting the assertion of increased challenges within this student group. These challenges included immense academic pressure, performance anxiety, mental health concerns, social isolation, loneliness, physical health issues, and fatigue (Rosset et al., 2022). The competitive atmosphere, high expectations, and the demanding nature of music studies exacerbate these issues.

Effective coping mechanisms and support systems are essential in addressing the mentioned challenges (Melnichuk et al., 2022). Universities can play a critical role by providing counseling services, stress management workshops, and peer support groups specifically tailored for music students. Resilience and well-being among music students can be achieved by holistic education approaches that integrate mental health awareness into the curriculum and provide opportunities for students to discuss and manage their challenges.

2. THEORETICAL OVERVIEW

2.1. Music and the vocals: neuropsychological and neurobiological aspects

Research by Norman-Haignere et al. (2022) has identified a specific group of neurons in the human brain that responds to singing, but not to other types of music. These neurons, located in the auditory cortex, respond uniquely to the combination of voice and music, distinguishing singing from regular speech or instrumental music. This finding highlights a fine-grained segregation of function within the auditory cortex, aligning with an intuitive distinction within music. Silbersweig & Sharma (2018), in turn, have determined that different brain regions are activated depending on the type of music, whether melodic or dissonant, and the activity involved, like listening, playing, learning, or composing. The researchers argue that music can alter brain structure and function after both immediate and repeated exposure, with musical training over time shown to increase the connectivity of certain brain regions.

Mateos-Moreno and Erlanson (2023) argued that changes in brain circuitry and connectivity due to music help could activate certain brain regions for healing. Their research has explored the therapeutic power of music for patients with various neurological conditions, including dementia and depression. The research indicated that rhythmic music stimulated brain circuits in people with Parkinson's disease, aiding physical movement. People with short-term memory loss from Alzheimer's disease often recognize familiar songs, which indicate that these memories are encoded into their long-term memory.

Silbersweig and Sharma (2018) advocated that music could activate many different parts of the brain, including the temporal lobe, cerebellum, amygdala, and hippocampus. Researchers noted that amygdala and hippocampus played roles in emotions and memories, while other parts of the brain's reward system were activated by music, underlining the comprehensive impact of music on the human brain. According to the study by Norman-Haignere et al. (2022), music perception involves active generation of predictions about what might happen next. Music perception, action, emotion, and learning all rest on the human brain's fundamental capacity for prediction, as formulated by the predictive coding of music model. Their study considers music from a neuroscientific perspective. It explains how the formulation of music perception and expertise in individuals can be extended to account for the dynamics and underlying brain mechanisms of collective music-making.

While vocal therapy and music therapy share common ground in using music as a therapeutic medium, they differ in their primary tools (voice versus a broader range of musical elements), techniques, and potentially in their specific therapeutic goals and outcomes. More detailed comparisons would require further research into clinical studies specifically contrasting these two approaches (Tab. 1).

Tab. 1
Differences between vocal and music therapy.

	Clinical focus and methods	Therapeutic goals	Techniques and applications	Research and efficacy
Vocal therapy	Vocal therapy, as a subset of music therapy, primarily uses the human voice as a therapeutic tool. This can include singing, vocal improvisation, and other vocal techniques.	Vocal therapy often focuses on the expressive and emotional aspects of using one's voice, potentially aiding in emotional release and personal expression.	Vocal therapy techniques are specifically centered around the use of voice. This might include breathing exercises, vocal warm-ups, and singing.	The research on the specific impacts of vocal therapy versus music therapy is still emerging. However, both fields acknowledge the importance of music and rhythm in therapeutic settings, with studies noting improvements in mood, stress levels, and even cognitive function in different patient populations
Music therapy	Music therapy, more broadly, may incorporate a variety of instruments and musical elements, including but not limited to the voice.	Music therapy, while also addressing emotional and expressive needs, can be more diverse in its aims, including cognitive, social, and motor skills development, depending on the instruments and techniques used.	Music therapy might employ a wider range of activities like playing instruments, listening to music, composing music, and movement to music.	

2.2. Singing and emotional state: An analysis of their interrelation

Bullack et al. (2018) suggested that singing could greatly increase impacts on positive and negative affect, social connectedness, and physiological stress compared to non-singing. Regular choral singing was also believed to mitigate a range of mental and physical health problems (Clift & Hancox, 2010; Livesey et al., 2012).

Such factors as singing ability, the size of the singing group, and the social aspect of singing play a crucial role in how singing affects the singers' organism. Exposure to music might lead to different psychobiological changes compared to active participation in singing, as evidenced by previous studies conducted by Kreutz et al. (2004) and Weinstein et al. (2016). As for the physiological health benefits, cortisol, a hormone associated with emotional stress, and salivary alpha-amylase, a stress-related parameter in the autonomic nervous system, are known to fluctuate in response to singing activity (Kang et al., 2017). A study comparing singing and non-singing conditions in a naturalistic choir setting found that singing led to higher ratings of positive affect, lower ratings of negative affect, and stronger perceived social connectedness. However, no significant changes were observed in biological stress markers like cortisol and alpha-amylase over periods of 30 and 60 minutes (Bullack et al., 2018).

Furthermore, music therapy interventions have been shown to significantly reduce excessive anxiety in college students. In a study involving 240 undergraduates with diagnosed excessive anxiety, those who received music therapy interventions showed a more considerable reduction in anxiety scores compared to the control group receiving conventional mental health treatment (Zaragoza-García et al., 2021). Music education has been found to have

a significant positive impact on the psychological well-being of students, which in turn improves academic performance. The study also highlighted the mediating effects of self-esteem and self-efficacy in this relationship. Structural Equation Modeling (SEM) technique was employed in this study, involving 319 respondents from undergraduate and graduate institutions in China (Wang et al., 2022).

The application of music therapy in education was suggested to facilitate the formation of a sound personality and promote healthy psychological development. The study emphasized the importance of incorporating music therapy into educational methods that resonate with students’ real-life experiences (Hou, 2022). These studies highlighted the potential of vocal and music therapy in enhancing the psychological well-being and academic performance of university students (Tab. 2).

Researcher(s)	Psychological problem	Description
Leahy et al. (2003)	Mental health concerns	Mental health issues, including anxiety, depression, and stress, are commonly reported among university students. The competitive atmosphere, high expectations, and the demanding nature of music studies exacerbate these issues. Music students, who often engage in long practice hours and face unique performance pressures, are particularly susceptible.
Hays & Minichello (2005)	Social isolation and loneliness	Pursuing a degree in music can often lead to social isolation. Extensive practice hours and individual-focused training can limit social interactions, leading to feelings of loneliness and detachment. This isolation can further impact mental health and academic success
Williamon & Thompson (2006)	Physical health and fatigue	The physical demands of music practice, especially for instrumentalists, can lead to fatigue and physical health issues. These physical challenges, in turn, can affect psychological well-being and academic performance.
Clark & Williamon (2011)	Coping mechanisms and support systems	Addressing these psychological challenges requires effective coping mechanisms and support systems. Universities can play a critical role by providing counseling services, stress management workshops, and peer support groups specifically tailored for music students.
Kenny (2011)	Academic pressure and performance anxiety	Students in higher education often face immense academic pressure, which is particularly acute among music students. Performance anxiety, a prevalent issue in music education, can lead to stress, diminished self-esteem, and even affect academic performance. This anxiety is not only limited to performances but also extends to academic evaluations and peer comparisons.
Ascenso et al. (2017)	Enhancing resilience and well-being	Encouraging resilience and well-being among music students is essential. This can be achieved through holistic education approaches that integrate mental health awareness into the curriculum and provide opportunities for students to discuss and manage their challenges.

Tab. 2
Psychological challenges faced by students of qualification in music: Literature review.

In sum, universities and educational institutions need to recognize the unique challenges faced by music students and provide targeted support systems. Essential steps in mitigating the adverse effects of these challenges include developing effective coping strategies, promoting resilience, and fostering a supportive educational environment (Lunov, et al., 2022). Universities can improve the educational experience for music students by integrating mental health awareness into the curriculum and offering resources like counseling and stress management workshops.

3. OBJECTIVES AND HYPOTHESIS

This study aims to provide comprehensive insights into the psychological challenges faced by music students and the potential benefits of vocal therapy in addressing these challenges. The primary objective of this article is to investigate the psychological impacts of vocal therapy on university music students, with a focus on understanding how this therapeutic approach can influence their coping strategies, social connectedness, mental health, and overall resilience. This study seeks to explore the efficacy of vocal therapy as a tool for emotional release and personal expression, specifically among students undergoing the rigorous demands of music-related education.

The research hypothesis is that vocal therapy, as a specialized form of music therapy using the human voice, will significantly alleviate psychological stressors commonly faced by music students. By testing this hypothesis, the article aims to contribute to the understanding of mental health interventions suitable for music students and advocate the integration of creative and therapeutic approaches such as vocal therapy within university mental health services. This research is crucial for understanding the unique needs of this group and developing targeted interventions to support their mental health and academic success.

4. MATERIALS AND METHODS

4.1. Participants

The study involved 190 first- and second-year undergraduate music students, undergoing an adaptation period to the university environment and curriculum at the Vinnytsia Mykhailo Kotsyubynskyi State Pedagogical University, Vinnytsia, Ukraine. The study divides participants into two random groups: Group X (students who do not participate in vocal therapy) and Group Y (students participating in vocal therapy). The study design is summarized in Table 3.

Tab. 3
Determination of psychological
impacts of university life on the
focus groups.

Group	Number of participants	Intervention	Assessment areas
Group X	95	No vocal therapy	Academic pressure, mental health, social isolation, coping mechanisms, resilience
Group Y	95	Vocal therapy	Academic pressure, mental health, social isolation, coping mechanisms, resilience

The study was conducted over the course of one academic year. Group X did not receive any vocal therapy sessions, while Group Y participated in weekly vocal therapy sessions. Both groups were assessed using the selected psychological tests at the beginning and end of the academic year. This contributed to a comparative analysis of the effects of vocal therapy on the defined psychological aspects of university life for music students.

Data collected from the psychological tests were analyzed to identify any significant differences between Group X and Group Y in terms of academic pressure, mental health concerns,

social isolation, coping mechanisms, and resilience. Statistical methods included t-tests for independent samples and ANOVA for comparison between groups.

4.2. Brief description of the conducted psychological tests

To conduct this research, the authors resorted to the following tests:

1. Kenny Music Performance Anxiety Inventory (K-MPAI) is specialized tool designed to measure levels of performance anxiety specifically in musicians, focusing on stress and anxiety related to music performances and academic evaluations. This inventory is particularly relevant for music students, as it targets the unique pressures of performing arts education.
2. Short Form-36 (SF-36) is a comprehensive questionnaire that assesses various aspects of physical and mental health. Within the context of this study, the SF-36 provided a broad view of the general health status of music students, capturing the impact of their academic and performance activities on their overall well-being.
3. UCLA Loneliness Scale is designed to measure subjective feelings of loneliness and social isolation. Given the intensive practice schedules and performance commitments, music students may experience isolation within the university setting. This scale helped to quantify such feelings and their prevalence among the participants.
4. Coping Inventory for Stressful Situations (CISS) categorizes coping strategies into three main types: task-oriented, emotion-oriented, and avoidance-oriented. By applying the CISS, the study sought to understand how music students manage stress related to their university life, including practice, performance, and academic pressures.
5. Connor-Davidson Resilience Scale (CD-RISC) is employed to evaluate the resilience levels of music students. This scale measures the ability to withstand and bounce back from adversity. It is particularly pertinent for assessing how music students cope with the specific challenges of their field, such as performance anxiety and the competitive environment.

5. RESULTS

The K-MPAI scores ranged from 0 to 100, where higher scores indicated higher levels of music performance anxiety. At the beginning, both groups started with high anxiety levels, with Group Y slightly higher, possibly due to additional stressors related to vocal challenges. During the mid-semester, Group Y showed a notable decrease in anxiety, potentially because of vocal therapy. Group X also showed a slight decrease, which could be attributed to natural adaptation to the university environment and curriculum. At end of semester, Group Y demonstrated a significant reduction in anxiety levels, suggesting that vocal therapy was effective. Group X's decrease was more gradual, aligning with typical adaptation processes. Lower standard deviation in Group Y by the end of the semester indicated more consistent results within the group, possibly due to the stabilizing effect of vocal therapy (Tab. 4).

Tab. 4
Results of the K-MPAI test.

Group	Mean K-MPAI Score (Beginning) $\pm$ SD	Mean K-MPAI Score (Mid-Semester) $\pm$ SD	Mean K-MPAI Score (End) $\pm$ SD
X	70 $\pm$ 12	68 $\pm$ 11	65 $\pm$ 10
Y	72 $\pm$ 13	60 $\pm$ 9	50 $\pm$ 8

SF-36 is a widely-used health survey designed to assess general health status across multiple dimensions. The SF-36 includes scales such as physical functioning, bodily pain, general health perceptions, vitality (energy/fatigue), social functioning, role limitations due to emotional problems, and mental health (psychological distress and psychological well-being). We divided the participants into two groups: Group X (students not involved in a wellness program) and Group Y (students involved in a wellness program). The authors assumed that participation in a wellness program could have a positive impact on various dimensions of health and mental well-being (Tab. 5).

Tab. 5
Results of SF-36 test.

Group	Physical Functioning $\pm$ SD	Bodily Pain $\pm$ SD	General Health $\pm$ SD	Vitality $\pm$ SD	Social Functioning $\pm$ SD	Role Emotional $\pm$ SD	Mental Health $\pm$ SD
X	80 $\pm$ 5	75 $\pm$ 6	70 $\pm$ 7	60 $\pm$ 8	65 $\pm$ 7	60 $\pm$ 9	58 $\pm$ 10
Y	82 $\pm$ 4	78 $\pm$ 5	73 $\pm$ 6	70 $\pm$ 7	75 $\pm$ 6	70 $\pm$ 5	68 $\pm$ 4

Thus, according to the first two parameters, physical functioning and bodily pain, both groups had relatively high scores, indicating good physical health, with Group Y slightly better, possibly due to lifestyle changes encouraged by the wellness program. As for the general health, Group Y reported a slightly better perception of their general health, which might be influenced by increased awareness and proactive health behaviors. The next two parameters, vitality and social functioning, showed notable improvement in Group Y. This indicated that participation in the wellness program might enhance energy levels and social interactions. According to role emotional and mental health, Group Y showed higher scores, indicating better management of emotional roles and overall mental health, potentially as a result of the support and strategies learned through the wellness program.

For a study using the UCLA Loneliness Scale to evaluate feelings of loneliness and social isolation within the university setting, a similar data table was designed (Table 6). The UCLA Loneliness Scale is a tool used to measure one's subjective feelings of loneliness as well as feelings of social isolation. The UCLA Loneliness Scale typically uses a range of scores, where higher scores indicate greater feelings of loneliness. Participants were divided into two groups: Group X (students not involved in any social clubs or activities) and Group Y (students actively involved in social clubs or activities). The authors assumed that active involvement in social clubs or activities might reduce feelings of loneliness and social isolation.

Tab. 6
Results of the UCLA Loneliness Score.

Group	Average UCLA Loneliness Score (Beginning) $\pm$ SD	Average UCLA Loneliness Score (Mid-Semester) $\pm$ SD	Average UCLA Loneliness Score (End) $\pm$ SD
X	55 $\pm$ 8	53 $\pm$ 7	50 $\pm$ 6
Y	50 $\pm$ 7	40 $\pm$ 5	35 $\pm$ 4

Thus, at the beginning of the semester, both groups had moderate to high loneliness scores. Group X had a slightly lower score, possibly due to existing social connections. A decrease in loneliness scores was noticeable for Group Y at the middle of the semester. The authors suggested that active participation in social activities might be effective in reducing feelings of loneliness. Group X showed a slight decrease, possibly due to some natural adaptation to the university environment. At the end of the semester, Group Y demonstrated a significant reduction in loneliness scores, reinforcing the idea that involvement in social activities could greatly reduce feelings of loneliness and social isolation. Group X's gradual decrease might reflect a slower adaptation to university life without the support of structured social activities. The CISS assesses three types of coping strategies: Task-Oriented Coping, Emotion-Oriented Coping, and Avoidance-Oriented Coping. CISS scores are typically used to measure the extent to which individuals use each coping strategy, with higher scores indicating a greater reliance on that particular strategy. Participants were divided into two groups: Group X (students with access to university-provided mental health support and counseling) and Group Y (students without access to such support). The authors hypothesized that access to mental health support might influence the types of coping strategies adopted by students (Tab. 7).

Group	Task-Oriented Coping (Beginning) $\pm$ SD	Task-Oriented Coping (End) $\pm$ SD	Emotion-Oriented Coping (Beginning) $\pm$ SD	Emotion-Oriented Coping (End) $\pm$ SD	Avoidance-Oriented Coping (Beginning) $\pm$ SD	Avoidance-Oriented Coping (End) $\pm$ SD
X	55 $\pm$ 5	65 $\pm$ 4	50 $\pm$ 6	40 $\pm$ 5	45 $\pm$ 7	35 $\pm$ 6
Y	50 $\pm$ 6	55 $\pm$ 5	60 $\pm$ 5	65 $\pm$ 4	55 $\pm$ 8	60 $\pm$ 7

Tab. 7
Coping Inventory for Stressful Situations Results.

The interpretation of the results obtained was as follows:

- Task-Oriented Coping: Group X increased the results in task-oriented coping strategies by the end, possibly due to the skills and strategies learned through university support. Group Y showed a slight increase, potentially through self-guided learning or peer support.
- Emotion-Oriented Coping: Group X showed a decrease, suggesting that with support, students might be moving away from emotion-oriented strategies towards more task-oriented strategies. Group Y demonstrated a continued or increased reliance on emotion-oriented coping in the absence of formal support.
- Avoidance-Oriented Coping: Group X indicated a significant decrease, possibly due to the effectiveness of counseling in addressing underlying issues. Group Y's increase suggested a possible escalation in avoidance behaviors, possibly due to a lack of adequate coping mechanisms.

The last but not least test applied in this study was the CD-RISC, designed to measure resilience, or the ability to bounce back from negative emotional experiences and adapt to stressful situations or crises. The CD-RISC scores typically range, with higher scores indicating greater resilience. Participants were divided into two groups: Group X (students who have participated in a resilience-building workshop) and Group Y (students who have not participated in such a workshop). The authors hypothesize that participation in a resilience-building workshop might positively influence the resilience levels of students (Tab. 8).

Tab. 8

Determination of resilience among focus groups according to CD-RISC Score.

Group	Average CD-RISC Score (Beginning) $\pm$ SD	Average CD-RISC Score (Mid-Semester) $\pm$ SD	Average CD-RISC Score (End of Semester) $\pm$ SD
X	55 $\pm$ 10	65 $\pm$ 8	75 $\pm$ 5
Y	55 $\pm$ 10	58 $\pm$ 9	60 $\pm$ 7

Thus, the achieved results indicate the following:

- Beginning of the semester: Both groups had similar resilience levels, indicating a baseline before any intervention.
- Mid-semester: Group X showed a notable improvement in their resilience scores, suggesting the positive impact of the resilience-building workshop. Group Y demonstrated a slight increase, potentially due to natural adaptation processes or informal support systems.
- End of the semester: Group X significantly increased resilience, reinforcing the effectiveness of structured resilience training. The modest increase in Group Y could be attributed to the gradual development of personal coping strategies or other non-structured support.

6. DISCUSSION

The results drawn from various assessments – the Kenny Music Performance Anxiety Inventory (K-MPAI), the Short Form-36 (SF-36), the UCLA Loneliness Scale, the Coping Inventory for Stressful Situations (CISS), and the Connor-Davidson Resilience Scale (CD-RISC) – offer following insights.

Reduction of Performance Anxiety (K-MPAI Results). The most striking finding is from the K-MPAI scores, where Group Y (undergoing vocal therapy) showed a significant decrease in music performance anxiety compared to Group X (not undergoing vocal therapy). This suggests that vocal therapy, perhaps through enhancing self-expression and confidence, effectively mitigates performance-related stress. However, it is important to acknowledge the potential role of confounding variables in this discussion. Factors such as the baseline anxiety levels, previous experience with performance, individual resilience, and even external support systems could influence the outcomes observed. The decrease in performance anxiety attributed to vocal therapy needs to be contextualized within these broader variables, which may also play a crucial role in shaping the students' experiences and responses to therapy. Future research should aim to isolate the effect of vocal therapy from these confounders to more accurately assess its impact on music performance anxiety.

Enhanced General Health and Well-being (SF-36 Results). Group Y, engaged in vocal therapy, also demonstrated improvements in various health dimensions assessed by the SF-36. This includes better physical functioning, reduced bodily pain, and improved mental health. These improvements might be attributed to the stress-relieving effects of vocal therapy, which in turn can positively impact overall health.

Social Connection and Reduced Loneliness (UCLA Loneliness Scale Results). The results from the UCLA Loneliness Scale suggest that Group Y experienced less loneliness and social isolation. This could be due to the communal and interactive aspects of vocal therapy, fostering a sense of belonging and community among participants. The inherent social support within the university, previous social networks, and even individual predispositions towards social engagement could serve as confounding variables influencing the observed decrease in loneliness. The specific setting in which vocal therapy is conducted—emphasizing group

activities and shared experiences—might naturally facilitate connections that are not solely attributable to the therapeutic aspects of vocal exercises. Future investigations should explore the extent to which vocal therapy independently impacts loneliness and social isolation, distinguishing the therapy's effects from those of broader social interactions and pre-existing social networks.

Improved Coping Strategies (CISS Results). Group Y showed better coping strategies, particularly in task-oriented and emotion-oriented coping, as evidenced by the CISS. Vocal therapy might provide students with a constructive outlet for emotions, thereby promoting healthier coping mechanisms.

Increased Resilience (CD-RISC Results). The CD-RISC results indicate a significant improvement in resilience for Group Y. This could be due to the empowering nature of vocal therapy, which might help students develop a stronger sense of self-efficacy and adaptability.

These findings underscore the importance of integrating creative therapies such as vocal therapy into university mental health services. Vocal therapy not only addresses specific challenges faced by music students, such as performance anxiety, but also contributes to broader aspects of psychological well-being, including general health, social connectedness, coping strategies, and resilience. The study suggests that such therapeutic interventions can be an essential component of support systems within the university setting, especially for students in highly demanding and specialized fields like music. It highlights the need for universities to consider diverse and creative approaches to student mental health and well-being.

7. CONCLUSION

This study has provided significant insights into the psychological well-being of university music students and the potential role of vocal therapy as an effective intervention. The findings offer compelling evidence supporting the hypothesis that vocal therapy can positively impact students' mental health, resilience, and overall well-being. These outcomes are particularly relevant given the unique stressors and challenges faced by students in rigorous music programs. The use of vocal therapy was associated with a marked decrease in music performance anxiety among participants, as evidenced by the K-MPAI scores. This suggests that vocal therapy offers a valuable tool for music students to manage performance-related stress effectively. Students participating in vocal therapy showed improvements in various dimensions of health, as measured by the SF-36. This highlights the broader benefits of vocal therapy, extending beyond psychological aspects to encompass physical well-being.

The findings from the UCLA Loneliness Scale pointed to a significant reduction in feelings of loneliness and social isolation among students engaged in vocal therapy. This underscores the importance of social connectedness and community in the context of university life. The CISS results indicated that students undergoing vocal therapy developed more effective coping strategies, particularly in task-oriented and emotion-oriented coping. This demonstrates the role of vocal therapy in fostering adaptive coping mechanisms in the face of academic and personal challenges. The increase in resilience scores, as measured by the CD-RISC, among students participating in vocal therapy, is a critical finding. It suggests that vocal therapy contributes to building resilience, a crucial attribute for navigating the complexities of university life and beyond.

The findings of this study have profound implications for mental health services in university settings. They advocate for the integration of creative and specialized interventions like vocal therapy into mental health support structures. Such interventions can provide a holistic approach to addressing the diverse needs of music students, who often face unique challenges due to the nature of their studies. Future research should aim to explore the long-term effects of vocal therapy and its applicability to a broader range of student populations. Additionally, comparative studies involving other forms of creative therapy could provide deeper insights into the most effective strategies for promoting student mental health and well-being. In conclusion, this study contributes a vital perspective to the field of student mental health,

highlighting the effectiveness of vocal therapy as a multifaceted intervention. It underscores the need for university mental health services to adopt a more diverse range of therapeutic options, tailored to the specific needs of their student populations. By doing so, universities can play a pivotal role in not only enhancing academic success but also in fostering the overall well-being and resilience of their students.

CONFLICTS OF INTEREST

The authors declare they have no conflict of interest.

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Reference According to APA Style, 7th edition:

Vasylevska-Skupa, L., Onofriichyk, L., Teplova, O., Kushnir, K., & Shvets, I. (2024) Harmonizing the mind: Exploring the psychological impact of vocal therapy on music university students. *Convergências - Revista de Investigação e Ensino das Artes*, VOL XVII (34), 121-134. <https://doi.org/10.53681/c1514225187514391s.34.270>

Review Paper

DOI: 10.53681/c1514225187514391s.34.268

ENVOLVIMENTO DOS JOVENS DESIGNERS DE MODA EM PORTUGAL: PROCESSO CRIATIVO E A RELAÇÃO DA MODA COM VERTENTES ATIVISTAS

Involvement of young fashion designers in Portugal: creative process and the relationship between fashion and activist aspects



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RESUMO

Impulsionados pelas demandas da sociedade e pela crescente preocupação global, tanto em questões climáticas quanto sociais, alguns designers e marcas do setor da moda estão adotando práticas mais conscientes em relação ao ambiente e aos direitos humanos. O objetivo deste estudo é analisar o envolvimento dos jovens designers de moda e suas manifestações de ativismo no processo criativo. A pesquisa apresenta uma breve abordagem do contexto da sociedade portuguesa e do ativismo na moda, seguida por uma investigação exploratória que utiliza a abordagem metodológica qualitativa, com recurso a entrevistas em profundidade, nas quais se investigou o processo de socialização dos participantes e a relação que estabeleceram com a moda. Assim como o processo criativo e a sua relação com as diferentes dimensões da sustentabilidade, a fim de compreender o posicionamento e envolvimento desses designers.

ABSTRACT

Driven by society's demands and growing global concern, both in climate and social issues, some designers and brands in the fashion sector are adopting more conscious practices about the environment and human rights. This study aims to analyze the involvement of young fashion designers and their manifestations of activism in the fashion creative process. The research presents a brief approach to the context of Portuguese society and fashion activism. Moreover, it is followed by an exploratory investigation that uses a qualitative methodological approach, using in-depth interviews, in which the socialization process of the designers and the relationship they established with fashion. As well as the creative process and its relationship with the different dimensions of sustainability, to understand the positioning and involvement of these designers with activist aspects.

PALAVRAS-CHAVE

Designers de Moda; Ativismo; Posicionamentos.

KEYWORDS

Fashion Designers; Activism; Positionings.

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Submission date:
02/02/2024

Acceptance date:
19/10/2024

1. INTRODUÇÃO

De acordo com Lipovetsky (2009), moda é um fenómeno efêmero, temporal, cultural e antropológico. O autor aborda uma perspetiva profunda e abrangente sobre a moda, sujeita às mudanças frequentes que refletem períodos temporais, económicos e políticos da sociedade. Segundo o sociólogo Godart (2010), a moda está em constante movimento e construção. Além de representar uma atividade económica significativa, constitui uma manifestação artística e um fenómeno social situado entre a indústria e as artes. Torna-se crucial examinar esse sistema e compreender a influência que exerce sobre todos os participantes, seja na produção ou consumo, assim como nos seus impactos na sociais e ambientais.

Este estudo aborda a moda como movimento e criadora de mudanças que contribuem para uma sociedade mais sustentável a nível social, ambiental e económico. De acordo com Camargo & Freire (2017), o ativismo pode ser um catalisador para a moda sustentável, além do aspeto industrial. O objetivo principal desta investigação é compreender o envolvimento e o posicionamento dos jovens designers de moda portugueses com vertentes ativistas em seu processo criativo.

No que se refere ao estado da arte, procurou-se reunir informações documentais e científicas para o embasamento teórico. Adotando uma abordagem qualitativa de natureza exploratória, a pesquisa utilizou a técnica de entrevistas em profundidade, visando aprofundar e compreender o discurso dos jovens designers de moda. É relevante destacar que este artigo apresenta parte dos resultados obtidos na pesquisa realizada para a dissertação de mestrado de uma das autoras.

1.1. Problema

De acordo com Mazzarella et al., (2019, p. 04), existem indícios de que os designers estão assumindo um papel relevante associado ao ativismo. No entanto, percebe-se uma lacuna na literatura em relação a essa temática a nível nacional, destacando a necessidade de uma investigação, particularmente no contexto português. Com a finalidade de aprofundar a compreensão do sistema de moda, sobretudo pela perspetiva dos jovens designers. Por isso, ao longo do estudo busca-se responder à questão norteadora: De que modo os jovens criadores e designers de moda em Portugal incorporam, na sua prática criativa e/ou discurso, um manifesto e compromisso social, político, ambiental?

A pesquisa busca explorar as percepções, posicionamentos, envolvimento, desafios e expectativas dos jovens criadores e designers de moda em Portugal. Almeja-se contribuir para uma compreensão mais aprofundada do crescente ativismo de design e da sua capacidade de abordar questões sociais e contemporâneas relevantes (Fuad-Luke, 2009, p. 01). Busca-se, ainda, destacar o potencial que a moda pode ter como ferramenta de mudança social e cultural, e a necessidade de responsabilidade e consciência dos criadores.

2. ESTADO DA ARTE

2.1. Breve contexto da moda em Portugal

O período ditatorial de Salazar condicionou o desenvolvimento da produção de moda no país, o clima social e político não era conveniente a expressão de novos valores no campo cultural e das artes (Duarte, 2004; Teixeira 2000). Apenas, após a revolução de 25 de abril de 1974, com a restituição da democracia no país, a indústria e a criação de moda passaram por uma reestruturação significativa, incorporando o pronto a vestir nas lojas e conferindo maior competitividade e diversidade cultural ao mercado (Rodrigues, 2021 apud Cardim, 2014). As pessoas puderam expressar-se livremente, afirmar-se através do vestuário, provocar atitudes e valores coletivos (Duarte, 2004). Um evento marcante para a moda em Portugal, foi as “Manobras de Maio”, em 1986, que

consistia em um enorme desfile de moda coletivo e público (Silvano, 2021a). As Manobras de Maio marcaram profundamente as décadas seguintes, sendo realizadas nas ruas do centro histórico de Lisboa e fomentando o surgimento da semana de moda de Lisboa. Um movimento/manifestação que agitava a cidade despertando arte e moda, com uma vertente disruptiva para o período e a sociedade conservadora. O ensino institucionalizado de artes e design desenvolveu-se, com a criação dos primeiros programas de design nas Escolas de Belas-Artes (Costa et al., 2020).

A partir da década de 1970 o conceito de sustentabilidade começou a ganhar destaque na agenda internacional. Segundo Fuad-Luke (2009, p. 24) o conceito de sustentabilidade abrange três dimensões: a ambiental, envolvendo a integridade ecológica; a econômica, que busca fontes seguras e transparentes de subsistência; e a social, que visa respeitar os direitos humanos, trabalhistas e culturais, promovendo relações saudáveis entre todos os envolvidos. Apesar da indústria da moda e do mercado estarem direcionados para a produção de artigos mais sustentáveis até 2030, a implementação de práticas sustentáveis depende de vários fatores, “dos níveis educacionais e consciência ambiental, e rendimentos dos consumidores, que, mesmo nos países desenvolvidos permanecerão prevaletentes ainda por muito tempo” (Agis et al., 2021, p. 11). Para isso, foi desenvolvido pela ONU um plano de ação para enfrentar desafios globais, promover o desenvolvimento sustentável para as pessoas e para o planeta (BCSD Portugal, 2022). Devido ao papel significativo que a moda desempenha na sociedade, na economia global e local, na cultura e no ambiente, consideramos importante estabelecer conexões entre os ODS (Objetivos de Desenvolvimento Sustentável) da Agenda 2030 e o contexto português.

2.2. Contexto do ativismo e sua relação com a moda

Inicialmente, é necessário compreender a estruturação do ativismo para perceber qual a sua contribuição para a moda. Müller (2019, p. 42 a 63) destaca a falta de um consenso universal para definir o ativismo, dada a sua subjetividade e influências contextuais, como a localização geopolítica, o espaço temporal e cultural, além de instintos psicológicos e sociobiológicos dos indivíduos. Contudo, o conceito ganha características contemporâneas, expressa um envolvimento pessoal em ações que promovem mudanças políticas e sociais. Martin (2007, p. 01) destaca que “o ativismo é uma ação em nome de uma causa”. Dessa forma, ele não pode ser categoricamente classificado como algo intrinsecamente positivo ou negativo, visto que existem diversas formas de expressá-lo. Envolver-se como ativista demanda uma alteração de mentalidade centrada em ações (Mazzarella et al., 2019, p. 04). No âmbito do design, Fuad-Luke (2009, p. 27), define o ativismo de design como o “pensamento, imaginação e prática de design aplicados consciente ou inconscientemente para criar uma contra narrativa destinada a gerar e equilibrar mudanças sociais, institucionais, ambientais e/ou econômicas positivas”. Esse posicionamento pode contribuir para transformar o sistema, o comportamento das pessoas e promover um bem social maior. “Os movimentos cívicos das últimas décadas do século XX se centraram na questão das políticas identitárias, o século XXI tem sido marcado pelas questões de diversidade e da inclusão social” (Silvano, 2021b, p. 161). Podemos observar esse período de transformação da sociedade portuguesa após o 25 de abril, quando surge as manifestações de ativismo através da moda, com o movimento das “Manobras de maio”.

Lange (2019, p. 05), aponta que o ativismo pode apresentar-se de várias formas, inclusive de maneira “silenciosa”, como no caso do artesanato na moda, uma vez que ele contesta as normas de produção industrial mecanizadas predominante, atuando como um ato de resistência ao sistema que faz parte de uma produção humanizada. Essa forma de ativismo pode contribuir para a sustentabilidade na moda, pois envolve as pessoas fazendo com que percebam as suas responsabilidades, encontrem formas alternativas de produção e uso e podem promover mudanças no sistema da moda de forma mais conscientes (Mazzarella & Black, 2022, p. 07).

O maior movimento de ativismo na moda é o *Fashion Revolution*, que busca contribuir para o crescimento de uma produção e consumo mais responsável e uma moda mais ética. Seu objetivo principal é promover mudanças no setor, com foco na transparência, respeito e sustentabilidade (*Fashion Revolution*, 2023). Apontamos a importância de uma mudança de prioridades tanto dos consumidores como dos criadores. “Para isso é preciso fazer moda com propósito. Moda além da roupa. Moda a favor das pessoas e do planeta” (Carvalhal, 2016, p. 58). É nessa perspectiva que busca-se entender o papel dos profissionais ligados a moda em Portugal.

3. METODOLOGIA

O estudo tem como foco a análise do envolvimento dos jovens designers de moda em Portugal. Com base nos discursos, busca-se compreender a relação e o impacto que podem exercer na sociedade. Utilizamos a abordagem metodológica de pesquisa qualitativa, considerando que uma das principais vantagens dessa metodologia reside na sua capacidade de investigar, de forma aprofundada e detalhada, as sutilezas presentes nos processos sociais (Pachá & Moreira, 2022, p. 167). Essa abordagem está alinhada com objetivo principal, que é perceber o envolvimento e o posicionamento dos jovens designers, levando em consideração as singularidades de cada criador e suas manifestações na moda.

A técnica adotada para a recolha dos dados foi a realização de entrevistas em profundidade, com perguntas de resposta aberta. Esse tipo de entrevista, comumente utilizado em pesquisas sociais, permite uma abordagem mais aprofundada na obtenção de informações (Santiago et al., 2012). A amostra foi selecionada com critérios específicos, visando incluir criadores que contribuam para a moda nacional, finalistas e participantes das últimas edições dos concursos Sangue Novo e Bloom, das semanas de moda de Portugal.

Para conduzir a investigação de forma rigorosa, organizada e teoricamente fundamentada, desenvolvemos um modelo de análise (Tab. 1), dividido em duas dimensões de análise. Na primeira, exploramos a sensibilização do designer, reconstruindo o seu processo de socialização, e, na segunda, verificamos em que medida o posicionamento ativista está presente no processo criativo. Este modelo, inspirado no estudo de Reis & Magos (2022, p. 328), proporciona uma compreensão mais profunda da dinâmica social, do processo criativo, das expectativas e percepções dos designers

Tab. 1
Modelo de Análise da
Investigação.
Fonte: Risson, 2023.

Envolvimento dos jovens designers de moda em Portugal: processo criativo e a relação da moda com vertentes ativistas

Dimensões	Objetivos específicos	Indicadores
Consciencialização do designer	Analisar o trajeto biográfico dos criadores para entender o que determinou seu envolvimento ou não.	Dinâmicas de socialização do ativismo. Como se constituiu a relação com a moda.
	Perceber qual a contribuição da formação académica para os seus posicionamentos.	Impacto da formação académica na conceção social da moda.

Ativismo pela moda	Analisar as ações dos designers e identificar os principais desafios enfrentados para incorporar práticas sustentáveis e ativistas em seu processo criativo. Avaliar como os designers equacionam que as suas práticas podem gerar impacto na promoção da sustentabilidade, direitos humanos e justiça social na moda.	Processo criativo como manifestação de ativismo ou não. Expectativas e percepções dos criadores em relação ao seu posicionamento e a moda em Portugal.
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Tab. 1 (continuação)
Modelo de Análise da Investigação.
Fonte: Risson, 2023.

A pesquisa foi realizada em Portugal, com a participação de oito designers de moda que participaram dos concursos Bloom e/ou Sangue Novo, nas edições de 2020 a 2023. A recolha dos dados ocorreu por meio de entrevistas em profundidade, realizadas online, via Zoom ou por chamadas telefônicas. Os dados obtidos foram transcritos, codificados e submetidos a análise de conteúdo conduzida com o suporte do *software* NVivo, a qual permitiu organizar e interpretar os discursos com base na revisão bibliográfica. Para preservar a identidade dos entrevistados, estes foram codificados por letras e números, iniciando em E1, E2 e assim sucessivamente até E8. A amostra é composta por designers portugueses, com faixa etária compreendidas entre os 23 a 34 anos, onde quatro identificam-se com o género feminino, três com o género masculino e um como não-binário. Todos possuem formação superior ou profissionalizante na área de moda.

Na primeira parte das entrevistas, realizou-se uma breve aproximação ao método de entrevista biográfico, onde explorou-se o processo de socialização e a relação do designer com a moda. Posteriormente, na segunda etapa, optou-se por conduzir entrevistas em profundidade, com perguntas específicas voltadas para a compreensão do processo criativo no presente. Os resultados, serão apresentados juntamente com a análise e discussão correspondentes.

3.1. Análise e Discussão

No que se refere a socialização e a relação com a moda, a análise dos depoimentos dos designers revela que todos os entrevistados estiveram envolvidos em atividades artísticas e criativas desde a infância, tendo recebido uma educação artística. A maioria deles foram influenciados predominantemente por suas famílias, frequentemente associadas à moda ou a outras áreas artísticas. Isso evidencia que a educação e a família exercem um papel crucial no processo socialização e na formação da relação de cada um com a moda.

“Eu diria que é muito uma ambiguidade e multivalência das referências que eu tenho no dia-a-dia. E nas reflexões que estão surgindo numa constante análise do cotidiano. E, portanto, eu acho que todo o processo que tive até agora, desde se calhar quando era mais criança, o mundo que eu construo enquanto artista acaba por ser uma reflexão de todos os meus pensamentos dentro desse percurso” (E6).

No que diz respeito à consciencialização e à preocupação com alguma causa ou vertente de ativismo, a maioria dos entrevistados demonstrou algum grau de envolvimento. Foi observado que a maioria deles expressa uma preocupação em relação à sustentabilidade ambiental e social (E2, E3, E4, E6 e E7). Percebe-se que a componente ambiental é preponderante para todos, mas também são evidenciadas preocupações sociais: “Imagina, eu acho que social haverá sempre, pelo menos da minha parte. Eu sendo uma pessoa gay e estando constantemente preocupado, no sentido de querer afirmar questões LGBT” (E4). Um fator importante a ser considerado é o envolvimento dos criadores em movimentos ou ações de caráter social, sobretudo ligados à comunidade LGBTQIAPN+. Este dado sugere uma possível correlação entre a orientação

sexual e o envolvimento em questões de caráter social, indicando maior sensibilidade para o caráter social.

Em relação à contribuição da formação acadêmica para o posicionamento dos criadores, os participantes apontam que as questões de sustentabilidade geralmente estão associadas à dimensão ambiental, enquanto as questões sociais não recebem a mesma atenção. Um deles relata: “as questões sociais, não! Eu acho que isso não é falado, não é sequer equacionado, não é sequer uma questão para muita gente” (E4). Percebe-se com base nas informações obtidas, que, embora a temática da sustentabilidade, tanto no âmbito social quanto ambiental, esteja ganhando crescente relevância, ainda são temáticas com pouca abordagem em algumas instituições de ensino, seja superior ou profissionalizante. Especialmente na área de moda, que consome e utiliza tantos recursos e envolve diversos setores da sociedade, a incorporação desta temática é fundamental para o meio acadêmico e para os futuros profissionais. Por tanto, observa-se a necessidade de ajustar o foco acadêmico e profissional do design para incorporar as demandas atuais do planeta e da sociedade (Costa et al., 2020). É crucial abordar essas temáticas de forma ampla no sistema de ensino, criar condições e permitir que os novos profissionais alinhem a teoria e a prática em prol de melhorias.

Constatou-se que o fator determinante para o posicionamento dos designers, segundo os relatos, parte primeiramente do interesse pessoal. Percebeu-se que a abordagem de questões ativistas na universidade depende das relações interpessoais estabelecidas, do esforço individual e do interesse em definir prioridades e valores com os quais desejam trabalhar. Sendo assim, uma escolha de inteira responsabilidade e consciência dos designers no processo criativo (Carvalho, 2016, p.80). Possivelmente, o interesse pessoal desempenha um papel essencial na definição dos seus posicionamentos, devido aos seus princípios e valores. No entanto, Mazzarella et al., (2019) aponta no seu estudo que trazer mais conhecimento e incentivar o pensamento crítico dos alunos, contribui significativamente para instigar novas possibilidades, envolvimento e posicionamentos. Assim como, pode contribuir para uma moda sustentável.

Ainda no âmbito acadêmico, investigou-se qual o conceito de moda para os entrevistados, percebe-se uma concepção subjetiva e multifacetada. Enquanto alguns veem a moda como uma forma poderosa de expressão pessoal e aceitação da diversidade, outros são críticos em relação à sua superficialidade. Essas percepções estão alinhadas com conceitos abordados por Lipovetsky (2009) e Godart (2010), que destacam a moda como um fato social profundamente ligado à identidade individual e às mudanças sociais na sociedade moderna.

Quanto ao processo criativo e a manifestação de ativismo, o que se destaca são múltiplos estímulos e elementos, sejam culturais, históricos, seja uma notícia, uma referência visual, música, uma peça de museu ou o trabalho de determinado designer. O que sobressai são as questões de gênero ligadas à comunidade LGBTQIAPN+ e à cultura no sentido de mostrar e valorizar a sua própria cultura, seja portuguesa ou outra, cruzar tradições ou abordar algumas que são mais fragilizadas. Quanto às dificuldades o que se destaca como mais relevante é a dificuldade em manter um equilíbrio entre o comercial, artístico e conceitual.

No âmbito da sustentabilidade, observou-se que todos os entrevistados manifestam a preocupação com a sustentabilidade ambiental, adotando práticas como seleção de materiais menos prejudiciais, a reutilização de materiais existentes e o aproveitamento de desperdícios. Para alguns criadores a sustentabilidade, inicialmente não era uma preocupação, mas devido à escassez de recursos pessoais, acabaram por adotar técnicas e métodos de trabalho que consideram a sustentabilidade. E posteriormente, o que foi uma necessidade inicial transformou-se em um princípio, integrando-se aos seus valores e a uma produção mais responsável.

No que diz respeito à sustentabilidade social, observou-se que todos os jovens designers adotam o modelo de produção *slow fashion* ao criar para suas próprias marcas. Destaca-se a preocupação em produzir localmente, utilizando materiais nacionais, ressaltam que Portugal é um país com direitos aos trabalhadores. Essa abordagem reflete uma tendência pós-pandemia, destacada por Agis et al., (2021, p. 54 - 61), com a valorização do nacional tanto pelo consumidor quanto pelos criadores, impactando positivamente a responsabilidade social e ambiental na moda.

Alguns designers mencionam que apreciam trabalhar com técnicas e materiais artesanais, como o crochê, o trico, favos, bordados, a talagarça e outros. Os autores Lange (2019, p. 05) e

Mazzarella & Black (2022, p. 05), abordam essas práticas como uma manifestação de “ativismo silencioso”, contestando a produção industrial, visando uma valorização cultural, manual e de envolvimento com a comunidade, muitas vezes ocorrendo de forma inconsciente. Em relação à moda em Portugal, os designers reconhecem que, em termos produtivos, o país possui uma boa reputação, preocupando-se com a sustentabilidade, a origem dos materiais e as formas de produção. Conforme indicado pelo Instituto Nacional de Estatística (BCSD Portugal, 2022), essas práticas estão alinhadas com os ODS.

Os designers expressam uma visão crítica em relação à cultura de consumo e às semanas de moda nacionais. Como criadores, sentem falta de valorização da moda de autor pelos consumidores portugueses, destacando que o apoio nacional geralmente surge após a validação internacional. Estes fatores prejudicam diversas esferas e impactam o crescimento da moda nacional. Provavelmente seja um reflexo do contexto histórico português da moda.

Sobre as expectativas para o futuro, alguns estão otimistas em relação ao possível crescimento e reconhecimento da moda portuguesa no contexto global. No entanto, uma minoria adota uma visão mais pessimista, alegando falta de apoio, desvalorização e sem perspectivas para as áreas criativas no país. Ressaltam o potencial produtivo das indústrias em termos técnicos. Todos compartilham o desejo individual de crescimento e visibilidade, seja por meio de abordagens criativas ou sustentáveis, que contribuem para a diversidade, equidade e dinâmica do sistema da moda nacional.

4. CONCLUSÃO

A abordagem exploratória revela que a moda é um fenómeno social, de comunicação, de envolvimento e de diferentes formas de expressão. É possível verificarmos uma transformação do ativismo em Portugal, que inicialmente continha uma vertente de natureza política mais vinculada e atualmente incorpora questões de diversidade e inclusão. E a moda, enquanto mecanismo cultural e contemporâneo, é lugar de expressão dos conflitos e ideias emergentes (Silvano, 2021b).

Analisando os discursos dos designers, conclui-se que existe um grau de compromisso variável, destacando-se sensibilidades mais acentuadas em temas sociais, especialmente relacionados a questões de género e cultura. Os designers expressam o desejo de continuar a abordar temáticas responsáveis e conscientes socialmente, além de procurar minimizar os efeitos do impacto ambiental causado pela moda.

Constatou-se que eles procuram, essencialmente, usar a moda para questionar, relevar a sua identidade, levantar questões e gerar reflexões. Esse posicionamento consciente está alinhado com os valores pessoais dos designers. As suas criações e ações, podem contribuir para a sustentabilidade e a consciencialização das pessoas, seja na promoção de uma causa, no apoio a grupos sociais invisibilizados ou marginalizados pela sociedade ou na promoção de práticas de produção mais responsáveis.

Propõe-se para futuras pesquisas verificar como esses discursos se refletem efetivamente nas criações dos designers. Outras variáveis, como a orientação sexual, podem ser exploradas para compreender áreas específicas de envolvimento. Recomenda-se uma análise mais aprofundada e ampla, possivelmente utilizando uma metodologia mista, para uma compreensão mais holística do ativismo de design no contexto da moda em Portugal.

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Reference According to APA Style, 7th edition:

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Review paper

DOI: 10.53681/c1514225187514391s.34.233

O QUE SE GANHA, O QUE SE PERDE: ARTE PÚBLICA E GENTRIFICAÇÃO EM DUAS CIDADES DAS AMÉRICAS

What is achieved, what is lost: Public art and gentrification in two American cities



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RESUMO

Articulando noções da história das cidades, história da arte pública, morfologia urbana e urbanismo crítico, este artigo tem como objetivo investigar as respostas de dois artistas a processos de requalificação urbana e de gentrificação, apartados no tempo e no espaço. No caso do brasileiro Guga Ferraz, a cidade do Rio de Janeiro do começo do século XX, enquanto o estadunidense David Hammons responde às fortes transformações da cidade de Nova York nas últimas décadas. A metodologia se orientou por uma pesquisa de natureza exploratória, lastreada na revisão da literatura, em investigação arquivística em torno da obra dos dois artistas, além de observações críticas a partir da visita à estrutura de Hammons instalada em Nova York. De acordo com o que pudemos observar, tanto neste estudo como em outras pesquisas relacionadas, as reações de artistas a processos de requalificação de áreas urbanas e de sua reconfiguração social, impulsionados por interesses do capital, parecem oscilar entre a invisibilidade (Ferraz) e a instrumentalização perpetrada por forças que pretende enfrentar.

PALAVRAS-CHAVE

arte; transformações urbanas; gentrificação; Guga Ferraz; David Hammons.

ABSTRACT

Articulating notions of the history of cities, the history of public art, urban morphology and critical urbanism, this article aims to investigate the responses of two artists to processes of urban requalification and gentrification, separated in time and space. In the case of the Brazilian Guga Ferraz, the city of Rio de Janeiro at the beginning of the 20th century, while the American David Hammons responds to the strong transformations of New York City in recent decades. The methodology was guided by exploratory research, based on a literature review, archival research into the work of the two artists, as well as critical observations based on a visit to Hammons' structure in New York. According to what we were able to observe, both in this study and in other related research, the reactions of artists to processes of requalification of urban areas and their social reconfiguration, driven by the interests of capital, seem to oscillate between invisibility (Ferraz) and instrumentalization perpetrated by forces that they intend to confront.

KEYWORDS

art; urban transformation; gentrification; Guga Ferraz; David Hammons.

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Submission date:

24/09/2023

Acceptance date:

15/05/2024

1. INTRODUÇÃO

As grandes metrópoles atravessam continuados processos de transformações urbanísticas que, eventualmente, alteram suas feições aos limites do não reconhecimento. Em um mundo dominado pela lógica do capital e do neoliberalismo, essas mudanças no tecido urbano e social das grandes cidades são desenhadas em projetos que, frequentemente, acarretam processos de exclusão ao empurrar camadas mais pobres da sociedade para localidades distantes dos centros urbanos, localidades que se transformam em espaços de não visibilidade. Dessa maneira, vai se construindo uma feição de cidade que reserva seus centros urbanos para o usufruto daqueles que integram a camada social onde residem os privilégios.



Fig. 1

Interaction Início do desmonte definitivo do Morro Castelo em 1921, na atual rua México. Foto: Augusto Malta/Acervo AGCRJ. (Fonte: <https://infograficos.oglobo.globo.com/rio/castelo-360o.html>).

O desmonte do Morro do Castelo, no Centro da cidade do Rio de Janeiro, se situa entre uma das transformações que têm atravessado a história da cidade (Fig. 1). O arrasamento do morro deu origem à Esplanada do Castelo, na qual viriam a ser construídas, já nos anos 1930, edificações que visavam revelar a força do Estado brasileiro, tais como o Ministério da Educação e Saúde, mais tarde Educação e Cultura, e o Ministério da Fazenda, além de prédios comerciais ocupados por escritórios em uma sucessão de ruas abertas a partir da supressão do morro. Embora ideias em torno do desmonte do Morro do Castelo tenham começado a circular ainda ao século XIX, ele resistiu parcialmente ao “bota-abaixo” promovido nos primeiros anos do século XX pelo prefeito Pereira Passos.

A proximidade entre o Morro do Castelo, a “apenas vinte metros da civilização” (Motta, 1992 apud Menez, 2014, p. 73), e as novas edificações suntuosas da Avenida Central parecia acentuar o desejo de seu desmonte, de maneira a eliminar o “contraste violento entre a civilização (o homem branco descendente do europeu) e a barbárie (negro ou indígena) representada pela imagem do morro do Castelo” (Menez, 2014, p. 73). Nesse contexto social, o morro permanecia em pé apenas em função da ausência de recursos nos cofres da administração municipal.

No início da década de 1920, com a visita dos reis Alberto e Elizabeth da Bélgica ainda em setembro de 1920, além da proximidade das comemorações do primeiro centenário da independência do Brasil, o prefeito Carlos Sampaio recebeu o apoio necessário para o arrasamento do morro, que “era visto como um atraso para o Brasil, [um país] que devia se modernizar para finalmente entrar na seleta categoria de nações civilizadas” (Menez, 2014, p. 73).

Os destroços do desmonte do Morro do Castelo, que se posicionava às costas da igreja de Santa Luzia, foram utilizados pelo prefeito Carlos Sampaio para dar seguimento às obras

realizadas por Pereira Passos na ocasião da abertura da Avenida Central. Para tanto, Carlos Sampaio aproveitou a “pequena distância do material escavado até a sua deposição no mar, ao longo da praia de Santa Luzia e da enseada da Glória” (Reis, 1977 apud Paixão, 2008, p. 173). Assim, a cidade viu o mar recuar, deixando de bater nas bordas da igreja de Santa Luzia (Fig. 2), redesenhando as linhas do encontro do mar com a cidade. É justamente essa linha pregressa de encontro entre mar e cidade que o projeto de intervenção urbana de Guga Ferraz, *Até onde o mar vinha, até onde o Rio ia* (2014), visa recuperar no plano do simbólico e do sensível.



Fig. 2
Praia e Igreja de Santa Luzia, circa 1906. Biblioteca Nacional, Brasiliana Fotográfica (Coleção Mestres do Século XX). Foto: Rodrigues & C^o. Editores e Proprietários.
(Fonte: <https://brasilianafotografica.bn.gov.br/brasiliana/handle/20.500.12156.1/9218>).

Da mesma maneira, o artista estadunidense David Hammons resolveu redesenhar, em uma materialidade etérea, a memória de um grande armazém às margens do rio Hudson, em Nova York, local que era ocupado na década de 1970 pela comunidade do West Village, que ali saudava os encontros, a vida e a alegria de viver nos fins de tarde banhados pelo pôr do sol do outro lado do rio, atrás da cidade de Hoboken, Nova Jersey.

Assim como o Rio de Janeiro, o principal núcleo da cidade de Nova York, a ilha de Manhattan, atravessa permanentemente continuados processos de transformações que, em um tempo demarcado por poucas décadas, vão eliminando a diversidade em sua ocupação territorial. A cidade de Nova York, em especial Manhattan, é hoje uma cidade absolutamente gentrificada e turistificada, com a ocupação de seus bairros e distritos inexoravelmente atada aos interesses do capital e do neoliberalismo. Instalado na beira do rio, em frente às novas instalações do Museu Whitney e com a face voltada para Hoboken, uma cidade que já é outra cidade diante da gentrificação que se espalha espelhada em Manhattan, o próprio trabalho de David Hammons, ao mesmo tempo que, em suas linhas melancólicas, falam de um tempo pretérito, é também, em um movimento paradoxal, um fator propulsor de redesevolvimento da região do Meatpacking District, nas bordas do West Village, ao lado de outras atrações turísticas como o Museu Whitney e o Parque High Line.

Na busca por enfrentar as questões postas por esses dois projetos de arte aqui analisados, a investigação se debruçou sobre uma extensa literatura que visa enfrentar a presença e as respostas das artes diante de processos de requalificação urbana. Da mesma maneira, buscou-se uma leitura ampliada e aprofundada sobre as duas obras específicas, além de observações in loco da obra de David Hammons instalada em Nova York. Neste sentido, o artigo busca demonstrar que o fenômeno da gentrificação [1] não é um fenômeno recente,

uma vez que o projeto de Guga Ferraz faz referência a processos urbanos na cidade do Rio de Janeiro das primeiras décadas do século passado, muito antes de o termo gentrificação ser cunhado por Glass (1964), [2] que se espalha por diversas cidades na contemporaneidade, como exemplificado pelo projeto de David Hammons para Nova York, cidade absolutamente gentrificada e turistificada como outras tantas cidades do mundo.

Cabe ressaltar que, em sua constituição político-conceitual, os projetos analisados revelam condições bastante distintas, a começar pelo aspecto efêmero e crítico do projeto de Ferraz em oposição à utilização de material de alta tecnologia, resistente às condições meteorológicas, na recuperação melancólica do armazém no projeto de Hammons.

O artigo se organiza em três partes, sendo a primeira dedicada a uma articulação teórica que, amparada na história das cidades e do urbanismo crítico, visa avançar na tentativa de uma melhor compreensão das transformações das cidades modernas e contemporâneas sob a égide do neoliberalismo. Na segunda parte, o artigo se dedica a estudar o projeto de arte de Guga Ferraz à luz das transformações atuais e pretéritas na cidade do Rio de Janeiro, em nome de uma modernidade sempre perseguida. A terceira parte do artigo apresenta reflexões em torno da obra de David Hammons assentada em Manhattan, nas margens do rio Hudson, e de sua relação com os processos de transformações urbanísticas e de gentrificação na cidade. A obra de Hammons faz referência àquela de Gordon Matta-Clark que, em 1975, recortou paredes e piso do velho armazém antes que a edificação fosse suprimida da paisagem.

2. TRANSFORMAÇÕES EM MOTO-CONTÍNUO NAS CIDADES

As cidades têm atravessado, ao longo de suas histórias, permanentes processos de transformações, nos quais tentam se ajustar às novas necessidades cidadinas, quando não são simplesmente induzidos e pontificados ao sabor dos interesses especulativos do capital. Assim, as cidades vão sendo redesenhadas, reconstruídas, reconfiguradas, eventualmente desfiguradas ao revelarem semblantes em que não se reconhece mais o que foram. Isso pode transformar as relações entre passado, presente, história e memória em conflitos de difícil conciliação. São camadas que vão sendo sobrepostas no tecido urbano com novos prédios, novas avenidas, novos bairros em nome da evolução das cidades. Desse modo, vão-se aterrando, soterrando ou removendo os traços das “cidades anteriores”, sem que permaneçam traços das cidades que foram. Em outras situações, tempos diferentes parecem encontrar alguma forma de convivência no tecido urbano, reconfigurando essas cidades como palimpsestos.

No campo dos estudos urbanos, que aqui nos interessam em particular, “o tecido urbano se torna o suporte sobre o qual sucessivas ondas de agentes constroem, demolem e reconstróem seus ambientes” (Fowden et al., 2022, p. 5). Assim, os autores lembram que no palimpsestos textuais,

“[...] mesmo que o texto anterior permaneça, até certo ponto, exposto, o novo texto (ou textos) do palimpsesto geralmente não tem relação com o texto antigo. [Neste sentido,] a característica essencial de um palimpsesto é a ausência de correspondência entre o texto original e a reinscrição” (Fowden et al., 2022, p. 11-12).

Por sua vez, Andreas Huyssen, ao se afastar das leituras conciliatórias entre passado, presente e futuro na evolução das cidades, afirma que, “[...] como crítico literário, sou naturalmente atraído pela noção da cidade como texto, de ler uma cidade como um conjunto de sinais” (Huyssen, 2003, p. 50); entretanto, o autor sugere que “o custo do progresso foi a destruição de maneiras antigas de viver e de estar no mundo. [...] E a destruição do passado trouxe o esquecimento” (Huyssen, 2003, p. 2).

O apagamento apontado por Huyssen é facilmente constatado na evolução urbana das cidades brasileiras, nas quais se busca preservar traços do passado apenas em situações de interesse especulativo. Nessas ocasiões, os interesses de acumulação do capital centradas no

urbanismo neoliberal (Theodore et al., 2009; Smith, 2005, 1996) se articulam em alinhamento com a preservação do patrimônio cultural, da história e memória no desenvolvimento de estratégias de marketing em prol do mercado imobiliário especulativo.

É o que revelam as restaurações do patrimônio histórico trombeteadas pelo projeto de revitalização da zona portuária do Rio de Janeiro, no qual são ressaltadas as reminiscências da chegada e da presença na região de africanos escravizados (Cais do Valongo, Cemitério dos Pretos Novos, Pedra do Sal, entre outros). A restauração dos monumentos na região portuária, para além do reconhecimento e da valorização identitária de segmentos negligenciadas na história brasileira, cumpre a função de impulsionar empreendimentos bilionários que aproximam, em parceria, a Prefeitura da cidade e empresas privadas. Esses investimentos apontam, em convergência, para a valorização do solo e para a consequente mudança no perfil sociocultural da ocupação habitacional da região, atualizando o *rent gap* de Neil Smith. Nas respostas a processos de remodelação das cidades oferecidas pelos projetos dos dois artistas, o apagamento se apresenta de maneiras diferentes; no caso do projeto de Guga Ferraz, que redesenhou, com toneladas de sal grosso, as linhas do mar em um extenso trecho central do Rio de Janeiro, a evolução urbana da cidade parece jogar no plano do inverossímil a assunção de que, ali, nas bordas da igreja de Santa Luzia, o mar batia. Já o projeto de David Hammons para a cidade de Nova York, apresentado em caráter permanente na paisagem, visa recuperar o desenho, em seu formato mais esquemático e desidratado, o que foi a saudação ao sol nos finais de tarde do Pier 52, às margens do rio Hudson, afirmando, em sua melancolia, o que se perdeu no tempo, mesmo que o projeto tenha sido construído sobre as bases que remanescem semissubmersas na espessura do leito do rio.

3. O MAR DESAPARECEU NA PAISAGEM DA CIDADE

Em tom reflexivo e com certa perplexidade, o artista Guga Ferraz indaga: “Você sabia que o mar chegava até aqui?”; “Como pode[ia] o mar chegar até aqui?” (Ferraz et al., 2013, p. 32), estando agora tão distante. São camadas de tempos e de sucessivos aterros que fizeram o mar recuar, aterros que criaram, por exemplo, em pleno Centro do Rio, a 1.500 metros do antigo Paço Imperial, o aeroporto Santos Dumont ainda na década de 1930. O arrasamento do Morro do Castelo nos anos 1920 despejou pedras, terra e entulhos no aterramento da desaparecida praia de Santa Luzia, completando a Avenida Beira-Mar à esquerda do obelisco na direção de quem seguia da Avenida Central para a Zona Sul da cidade. Três décadas mais tarde, o desmonte do Morro de Santo Antonio forneceu o material para que se ampliasse a faixa de terra da Avenida Beira-Mar, o que fez o mar recuar, de novo, para a criação do Aterro do Flamengo. Inaugurado em outubro de 1965, o novo aterro abria vias expressas que, mais uma vez, favoreciam o deslocamento e a ligação entre o Centro e a Zona Sul da cidade, uma obsessão das administrações municipais no sentido de contemplar demandas das camadas mais abastadas da população carioca, permitindo que setores do mercado imobiliário capitalizassem “o *status* que a ideologia do ‘morar à beira mar’ oferecia a quem aí residia” (Abreu, 1997, p. 112).

O artista Guga Ferraz pergunta com espanto – “como podia o mar chegar até aqui?”; afinal, onde há pouco mais de um século se tinha o mar batendo em nossos pés, hoje não mais se vê o mar; “eu imagino a violência que não foi com a cidade a derrubada do Morro do Castelo e empurrar o mar para lá” (Ferraz et al., 2013, p. 32); ainda mais quando se reconhece que esse recuo do mar se deu (1) para preparar a cidade, capital do país, para as comemorações do primeiro centenário da Independência do Brasil, (2) de maneira a que o país fosse visto como merecedor de figurar entre as nações tidas como civilizadas, (3) de maneira a dar seguimento às reformas urbanas de caráter civilizatório introduzidas por Pereira Passos na primeira década do século XX, e (4) para extirpar dos arredores (dos fundos, para ser mais preciso) da via mais dourada da cidade à época, a Avenida Central, a presença de “gentes pobres” – os castelenses – que, em residências precárias, habitavam as encostas do Morro do Castelo, núcleo primeiro da ocupação da cidade de São Sebastião do Rio de Janeiro.

Quase 100 anos depois, Guga Ferraz respondeu ao arrasamento do Morro do Castelo e o aterramento da praia de Santa Luzia com a recuperação da antiga linha do mar, desenhada agora com sal grosso. Questionado se o uso do sal grosso à porta da igreja de Santa Luzia faria alguma referência à cultura religiosa, o artista afirmou que “o mar chegou até aqui e foi embora, e o que ele deixou... o rastro dele foi o sal seco... isso tem a ver com o mar estar ressentido”, como que a dizer “isso aqui era meu” (Ferraz et al., 2013, p. 29). Foram usados muitos quilos de sal grosso no entorno do entroncamento das avenidas Antonio Carlos, Wilson e rua de Santa Luzia. Com o sal grosso espalhado por onde outrora o mar encontrava a cidade, o artista recuperou a linha do mar de ontem nas ruas da cidade de hoje, em um trecho longo do asfalto onde até a década de 1920 era mar. Mar e praia desapareceram; o primeiro, de nossa visão, já a praia se foi para sempre.



Fig. 3

Guga Ferraz, *Até onde o mar vinha, até onde o Rio ia* (2010).

Vista área da intervenção no entorno da igreja de Santa Luiza, 2010.

Foto: Marcio Arqueiro. Fonte: *Arte & Ensaios*, n. 26, jun. 2013. (Fonte: <https://revistas.uffrj.br/index.php/ae/article/download/49727/27058>).

O projeto/intervenção urbana *Até onde o mar vinha, até onde o Rio ia* (2010, Fig. 3) integrou a exposição *Projetos (In)Provados* (1), organizada por Sonia Salcedo del Castillo para a Caixa Cultural do Rio de Janeiro (Castillo, 2010): “para a realização de seu trabalho, aproximadamente 5 metros cúbicos de sal grosso serão [foram] transportados de caminhões e depositados no local, no domingo anterior ao da semana de inauguração [da mostra], no dia 22 de fevereiro de 2010” (Castillo, 2015, p. 94).

Em entrevista, Guga Ferraz alerta, entretanto, que “*Até onde o mar vinha, até onde o Rio ia* é um projeto que não é só um trabalho, ele continua... O projeto ideal seria construir uma linha de sal grosso de quilômetros” (Ferraz et al., 2013, p. 31). Com isso, artista parecia antecipar outra versão da intervenção/performance/obra que realizou em julho de 2014, integrando um projeto da Funarte intitulado *Grande Área²* na região do Passeio Público, ponto em que o Centro da cidade começa a adentrar o primeiro bairro da Zona Sul, a Glória.

Com essas intervenções realizadas, que podem ser mais, recorrendo a toneladas de sal grosso deitadas sobre o piso asfáltico da cidade, Guga Ferraz reflete sobre a ocupação urbana da cidade do Rio de Janeiro, seu modelo de desenvolvimento e de exclusão, resultando em desigualdades, cicatrizes e ausências que têm sido perpetradas ao longo da história da cidade.

4. O "RIVER" ESTÁ PRESO NO PASSADO

Antes da abertura oficial da nova sede do Whitney Museum of American Art no Meatpacking District de Nova York em maio de 2015, o artista David Hammons visitou às novas instalações do museu ciceroneado pelo diretor Adam D. Weinberg. No percurso entre galerias, escadas e *halls*, sempre que podia, Hammons apontava os olhos para as grandes janelas do novo edifício em direção à paisagem do Hudson River. Diante daquele olhar insistente, Weinberg informou o artista que, justamente naquele ponto da beira-rio, Gordon Matta Clark (1942-1978) havia realizado uma de suas obras mais icônicas: *Day's End*. Passados alguns dias desde a visita, Hammons enviou ao museu um desenho/projeto que propunha o erguimento de um monumento em homenagem a Gordon Matta-Clark (Whitney, 2021). A proposta de Hammons previa a instalação de sua obra no mesmo ponto do rio – Pier 52 – que fora ocupado pelo armazém da intervenção, em 1975, do artista falecido três anos mais tarde. A intervenção de Matta-Clark consistiu na incisão de cinco recortes gigantescos nas paredes e estruturas do velho armazém, já abandonado, que abriam à visão o céu, as águas do rio e a paisagem urbana de Nova York e da cidade vizinha, Hoboken.

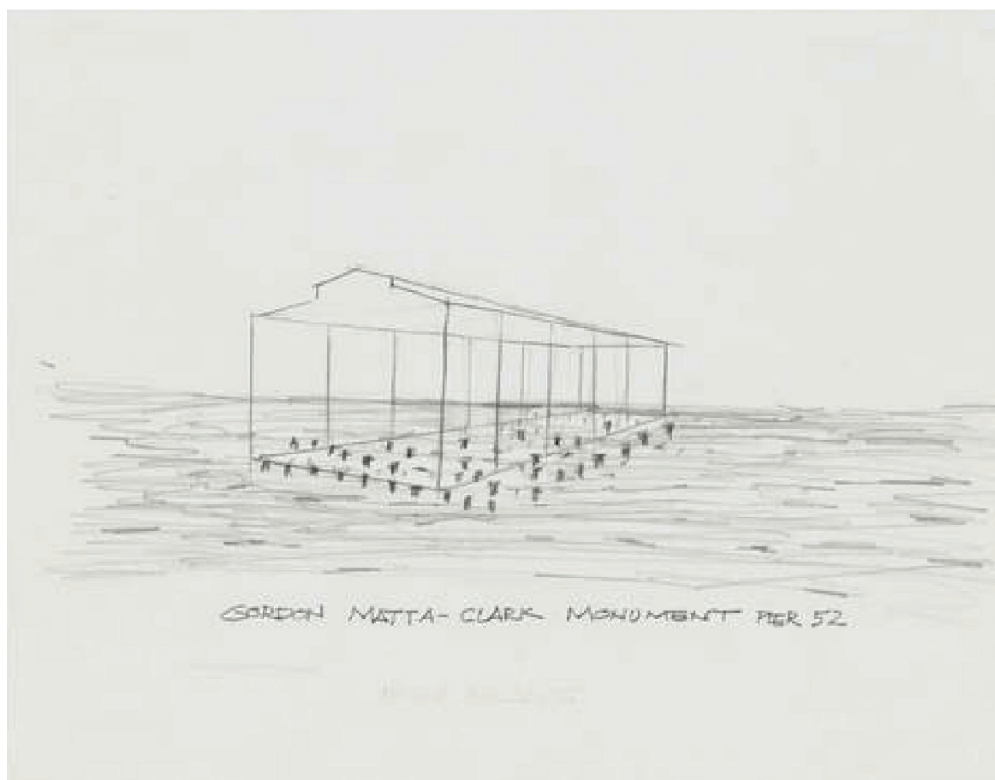


Fig. 4
David Hammons, *Day's End*
(2014). grafite sobre papel,
21,6 × 27,9 cm. Whitney
Museum of American Art.
(Fonte: <https://whitney.org/exhibitions/david-hammons-days-end?section=1#exhibition-feature>).

O desenho de David Hammons não deixa dúvida quanto à homenagem que propunha acolher ao inserir, em sua parte inferior, a inscrição manuscrita: “Gordon Matta-Clark Monument Pier 52” (Fig. 4). O desenho, em uma perspectiva que aponta para as profundidades do rio, destaca o quase-nada que sobrou do armazém: apenas algumas de suas estacas de sustentação, fincadas no leito do rio e aflorando levemente acima das águas. O local onde a obra definitiva de David Hammons foi instalada, em caráter permanente, no Hudson River Park em 2021, se mantém separada da nova sede do Whitney Museum por algumas dezenas de metros, uma via expressa e sinais de trânsito alongados que privilegiam o fluxo dos automóveis. A obra de Hammons, em suas linhas elegantes e esqueléticas, parece ser a materialização de um projeto, ainda inconcluso, recém-liberado da prancheta de um arquiteto. Para Ben Okri, poeta e romancista, trata-se de “um trabalho que está lá e, ao mesmo tempo, não está lá. É sobre comunidade. É um diálogo com a história da arte, é um diálogo com Nova

York, é um diálogo entre o mar [rio] e a terra. É escultural, é arquitetônico, é desenho” (Whitney, 2021).

Na realização da obra de Hammons foram empregados recursos de alta tecnologia, com partes da instalação metálica sendo produzidas na América do Sul, Europa e Canadá “com um tipo de aço muito particular, com uma liga muito especial, para que não viesse a ser destruído [pela exposição ao tempo]. Cada decisão tem um propósito funcional, cada decisão tem um propósito estético”, nas palavras de Adam D. Weinberg (Whitney, 2021). As conexões em aço fundido empregaram aço inoxidável super-duplex, metal extremamente resistente à corrosão, de maneira a atender tanto os requisitos estruturais quanto estéticos da obra (Binder et al., 2020).

Nesse aspecto, a estrutura elegante e precisa da obra de Hammons, erguida com a vocação à permanência em seu *site* definitivo à beira do rio, onde pode ser apreciado de dentro do Whitney, parece se descolar por inteiro da precariedade estampada e visível nos cortes pleno de riscos de Matta-Clark no antigo armazém. Algo como se o próprio desenho/projeto de Hammons, expresso na qualidade sensível do grafite a arranhar o branco do papel, não encontrasse ressonância ou coerência naquelas vigas e hastes, ao mesmo tempo, firmes, resistentes e elegantes. Ou como se quisesse apenas nos lembrar que os tempos são outros e, o que passou, no passado ficou (Fig. 5).



Fig. 5

Guga David Hammons, *Day's End* (2014-2021).
Foto do autor,
abril de 2023.

No passado ficou o momento em que Matta-Clark fez incisões no antigo armazém. Um momento em que o Pier 52 havia sido ocupado pela comunidade *queer* do West Village e da cidade, que se reunia no pier em torno da armazém para saudar a vida, a alegria de viver e de amar em liberdade, vivendo uma vida comunitária que tentava se resguardar e se proteger da violência a que se expunha no cotidiano da cidade.

A obra *Day's End* de Hammons, em sua melancolia cinzenta refletida nas sofisticadas estruturas de aço, reproduz, em uma versão desidratada pela espessura da história e das transformações urbano-sociais de uma cidade *that never sleeps*, aquilo que Nova York perdeu, aquilo que ficou para trás. *Day's End* parece replicar, em seus vazados e vazios de gentes, a ideologia neoliberal que domina o cotidiano da cidade de Nova York, onde tudo, absolutamente tudo, é otimizado para o seu máximo rendimento. Uma cidade que aproveita cada canto abandonado, mesmo que seja sobre o rio, para criar uma situação que gere dividendos em seu continuado processo de turistificação; é o caso do High Line Park, que tem sua entrada sul ao lado do Whitney Museum. Nova York, talvez mais que nunca, é hoje a meca do capital e do turismo, ou do capital do turismo.

Para além das conexões mais diretas entre as duas *Day's End*, a obra de Hammons revela o que foi suprimido pelo tempo que passou, em uma cidade que parece perdida em sucessivas ondas e continuados processos de gentrificação e de turistificação (Gladstone & Fainstein,

2001; Quintana & Batel, 2022; Sequera & Nofre, 2018). Com isso, Nova York perdeu qualquer sentido comunitário e mesmo o seu sentido de cidade. As forças do urbanismo neoliberal encontram na Nova York de hoje “a sua mais completa tradução” [3]. Uma cidade que recentemente substituiu a campanha “I love NY”, criada na década de 1970 pelo legendário Milton Glaser (Barron, 2023) por outra que agora diz “We love NY”, sem que se saiba exatamente quem está representado em “we”.

5. CONSIDERAÇÕES FINAIS

No enfrentamento dos processos incontroláveis do desenvolvimento urbano de duas cidades americanas – Rio de Janeiro e Nova York –, Guga Ferraz e David Hammons, cada qual à sua maneira, em respeito às diferentes sensibilidades e aos modos de operacionalização de seus processos criativos, criaram obras-projetos que intervieram nos espaços públicos dessas cidades. Os dois projetos oscilam entre a efemeridade do sal grosso esparramados pelo asfalto e a permanência do aço de alta tecnologia, as obras de Ferraz e Hammons sinalizam, dentro dos limites da arte, para a necessidade de as cidades não virarem as costas para suas histórias e para sua memória.

Entretanto, essa parece ser uma guerra perdida. As grandes cidades contemporâneas, impulsionadas pelas forças neoliberais e pelos processos de gentrificação e de turistificação, parecem seguir em frente, derrubando o que eventualmente encontram pela frente. Na mesma medida em que os dois casos estudados revelam sua relevância, no campo próprio da arte, em posições político-críticas bastante distintas, revelam igualmente sua irrelevância e suas limitações no enfrentamento das questões que orientaram as escolhas dos artistas: o crescimento descontrolado das cidades contemporâneas e os processos de apagamento da história e da memória.

FINANCIAMENTO

Esta pesquisa foi parcialmente financiada com recursos do Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq), através do Programa de Bolsas de Produtividade em Pesquisa (PQ), Processo: 313342/2021-0.

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NOTAS

[1] Outros dez artistas, além de Guga Ferraz, participaram do projeto e exposição desenvolvidos por Sonia Salcedo del Castillo para a Caixa Cultural (Rio de Janeiro). A exposição *Projetos (In)Provados* foi realizada entre 1º de março e 18 de abril de 2010.

[2] O projeto *Grande Área* 2014, com curadoria de Xico Chaves e Luiza Interlenghi, contou com a participação de artistas visuais brasileiros que desenvolveram suas ações em espaços públicos de seis capitais brasileiras – São Paulo, Salvador, Rio de Janeiro, Belo Horizonte, Recife e Brasília, por ocasião da Copa do Mundo FIFA, realizada no país em 2014.

[3] Na expressão de Caetano Veloso a respeito de outra grande metrópole das Américas – São Paulo.

BIOGRAFIA

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Reference According to APA Style, 7th edition:

Oliveira, L. S. (2024) O que se ganha, o que se perde: Arte pública e gentrificação em duas cidades das América. *Convergências - Revista de Investigação e Ensino das Artes*, VOL XVII (34), 145-155. <https://doi.org/10.53681/c1514225187514391s.34.233>

Review paper

DOI: 10.53681/c1514225187514391s.34.262

TRANSFORMABLE FURNISHING: FROM 'MODERN HOME' TO CONTEMPORARY HOUSE

Mobiliario transformable: del "hogar moderno" a la casa contemporánea

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ABSTRACT

Among the many problems highlighted by the recent COVID-19 pandemic is the inadequacy of many homes to accommodate people during a health emergency. During the various lockdowns, flats that needed to be bigger, more distributed, or more modern did not help to organise one's time or daily activities (studying, working, exercising, or simply secluding oneself) in the best possible way. Redesigning the existing seems a possible solution, not by demolishing obsolete dwellings, but by adapting them through 'light systems,' i.e., through furnishings: an 'ex-post' intervention that can redevelop spaces by leveraging the concepts of transformability and flexibility. Lessons can be learned in this respect, from the history of modern housing to contemporary experience. The article broadly traces this history (with a look at the culture of Italian living) so that from experience, we can learn solutions for living in the future.

KEYWORDS

Furnishing; transformability; modern and contemporary home; Italian design.

RESUMEN

Entre los muchos problemas que ha puesto de manifiesto la reciente pandemia de COVID-19 está la inadecuación de muchas viviendas para alojar a las personas durante una emergencia sanitaria. Durante los diversos encierros, los pisos que debían ser más grandes, más distribuidos o más modernos no ayudaban a organizar el tiempo ni las actividades cotidianas (estudiar, trabajar, hacer ejercicio o simplemente recluirse) de la mejor manera posible. Rediseñar lo existente parece una posible solución, no demoliendo viviendas obsoletas, sino adaptándolas mediante un "sistema ligero", como el mobiliario: una intervención "a posteriori" que puede reurbanizar los espacios aprovechando los conceptos de transformabilidad y flexibilidad. Se pueden extraer lecciones en este sentido, desde la historia de la vivienda moderna hasta la experiencia contemporánea. El artículo traza a grandes rasgos esta historia (con una mirada a la cultura de la vivienda italiana) para que, de la experiencia pasada, podamos aprender soluciones para vivir en el futuro.

PALABRAS CLAVE

Mobiliario; transformabilidad; casa moderna y contemporánea; diseño italiano.

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Submission date:
01/03/2024

Acceptance date:
25/05/2024

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Castelo Branco.
Convergências: Volume 17 (34)
30 novembro, 2024

1. INTRODUCTION

There are countless analytical criteria with which to observe and reflect on the evolution of the residence during the 20th century up to the present day. Organisation and distribution of space, construction techniques, and materials have influenced the modern and contemporary habitat; no less so have the hypothetical responses of architects to social problems or new lifestyles and consumption to modify the gradually consolidated structures of the home over time. Finally, the recent pandemic is necessarily restructuring thinking on housing design, given the ineffectiveness of many previous housing typologies. Due to the health emergency and the confinements imposed in one's own home, many dwellings have shown their limits - physical, functional, and psychological - mainly due to their small size or their almost open as well as indivisible rooms. Critical reflection on the flexibility and adaptability of interiors as a possible solution to the adaptation of obsolete housing structures in the existing building stock has therefore returned to the fore.

Suppose the transformability of domestic spaces belongs primarily to the traditional oriental culture. In that case, it has nevertheless crossed the Western one throughout the previous century according to the interpretative lens of the integration between architectural space and furnishings or of the juxtaposition between the two, re-proposing itself up to the present day with ingenious solutions. Depending on the different epochs, that design theme is declined in different forms and arrangements, which have qualified new ways of interpreting and living in the home. The design methods have been characterised above all as 'arredamento' [furnishing] - understood as an ad hoc intervention, remodelled over time, that can be dismantled, even repositioned elsewhere - a term that is now obsolete, but which has, for a long time, positively marked an intense architectural season, especially in Italy.

Concerning the development of modern architecture, writes Giulio Carlo Argan, 'furniture tends to increasingly identify with or integrate itself with the construction fact' (Argan, 2003, p. 94). He adds further on: 'Everything, in modern architecture, tends to become "mobile"; and the "furniture" that constitutes furnishings can truly be considered the most sensitive and delicate formal terminations of architecture' (ibid., 95). From these considerations, we look at the modern home as a complex interplay between architecture and furnishings, in which flexibility can qualify the adaptation of domestic space to changing social conditions.

2. PROBLEM, STATE OF THE ART AND METHODOLOGY

The essay briefly traces a history of the flexibility and transformability of domestic furniture and its ability to modify inhabited space. It is considered a pertinent topic for a study, not only because it is a theme only hinted at in the *Histories of Furniture* and the *Histories of Interiors*, but because it is highly topical: the recent experience of the COVID-19 pandemic has, in fact shown how many modern homes have been unsuitable for the coexistence of several people - primarily engaged in different activities, such as studying, attending classes, working, exercising, and others - in the same house, if the latter has insufficient floor space. Recalling how, in the past, living spaces could be temporarily divided can serve to rethink the project of adapting housing structures during health or climatic emergencies differently. In outlining the history of transformable furniture, the essay considers some historical precedents: examples of transformable furniture or projects for the temporary modification of certain rooms in the home appeared as early as the end of the 18th century and then during the second half of the 19th century. Subsequently, the development of the essay focuses on the experiments of various designers during the 20th century, with a focus on Italian architects and designers who made a fascinating contribution to the idea of transformability of interiors, both using furnishings that are themselves transformable and through mobile partitions of various types.

The survey methodology is historical-critical and organised according to a strictly chronological

criterion. Although hinting at historical precedents, the time range the essay focuses on is from the 1920s - the first rationalist trials - to the 1970s - the avant-garde examples at the exhibition 'Italy: The New Domestic Landscape' edited by Emilio Ambasz at Museum of Modern Art (New York 1972) -. In conclusion, the essay mentions some more recent projects that have picked up the design heritage of the 20th century, reworking it in a contemporary key.

The geographical area of investigation relates to Western countries, mainly Europe, the United States, and Italy. However, for contemporary projects, mention is also made of projects realised in other countries that are considered innovative in terms of the transformability of the home through furnishings and/or light movable partitions.

3. SOME HISTORICAL PREMISES

Interesting precedents of the transformability of the home can be found in all historical periods. However, from the second half of the 19th century, a specific interest in this design approach can be discerned. Giedion (1948) qualifies the 19th century as the age of invention and mechanisation of work, both in the industrial and domestic fields. In the latter, various social conditions - the increasing shortage of service personnel, the shift of family residence to the suburbs, and the family's economic autonomy- directed Americans' lifestyles. The single-family home is presented as an autarkic residence, i.e., self-sufficient in production (food and clothing above all) and consumption of goods; the wife-mother-father runs it, while the husband-father is reserved the role of Breadwinner, active outside the home.

For a housewife who was as independent as she was aware of her role in supporting the nation, Beecher & Stowe Beecher (1869) designed a neo-Gothic suburban cottage in which they experimented with new spatial organisation solutions. Among them, on the mezzanine floor of the house, the dining room features a screen on pivoting wheels, which temporarily divides the space to accommodate the nightly rest of one or two guests. On one side, the movable wall accommodates decorative elements or paintings; on the other, it has a series of storage units to serve the occupants of that small habitat, while the bed can split into two beds by sliding one under the other. (Fig. 1)

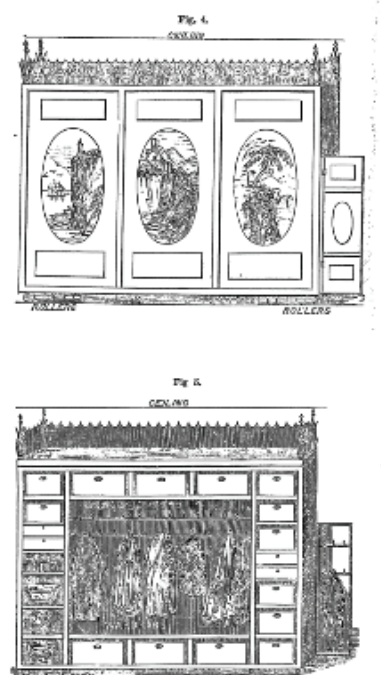
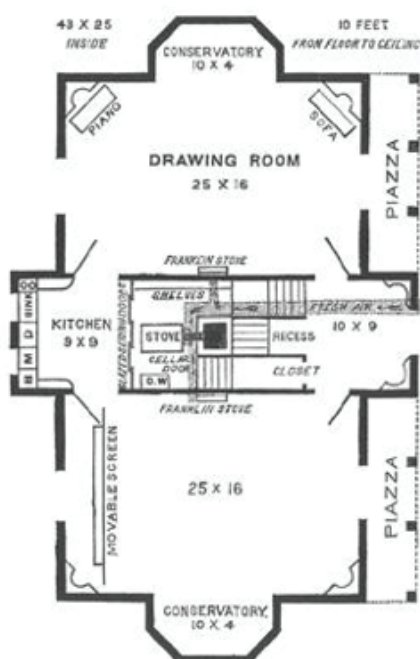
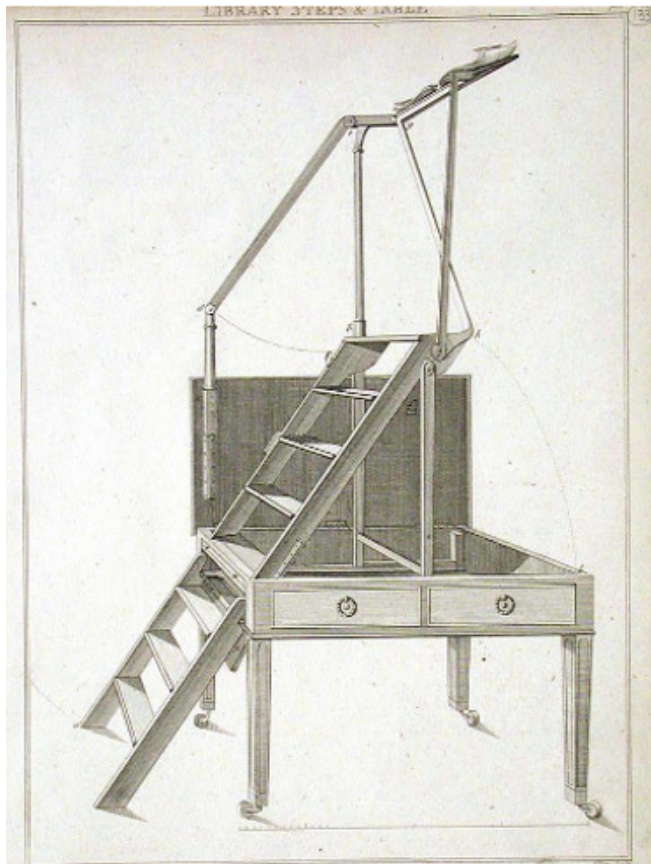


Fig. 1
The picture shows the internal organisation of the ground floor of the house designed by sisters Catharine Beecher and Harriet Stowe Beecher and the movable screen which, when moved around the room, allows a guest to be accommodated, as well as acting as a container on the one hand and as a display wall on the other.
(Source: Beecher & Stowe Beecher 1869.)

**Fig. 2**

Garnet Terry's engraving shows a design by Thomas Sheraton for a library table with integrated retractable ladder for consulting books in a private library (c. 1792). (Source: Author's archive).

At the same time the Beecher sisters were composing a different idea of home, American industry began to produce transformable furniture, such as pianos that could be modified into beds, extendable chairs for daytime rest, and multifunctional desks. Experimentation with such furniture had, in fact, already taken place in craft forms in Europe: in addition to a few vernacular examples in Ireland and Great Britain at the end of the 18th century, the transformability of furniture defined as 'metamorphic' or harlequin had been tested by refined cabinet-makers such as Thomas Sheraton in England (Fig. 2) or Giovanni Socci in Italy.

However, the United States was the first to attempt their standardisation and subsequent mass production, thanks to a series of inventors who eagerly filed countless patents with the U.S. Patent Office. (Fig. 3) At the beginning of the 20th century, an exciting contribution was made by companies such as Sears, Roebuck and Co. (Chicago-Philadelphia), who sell objects, furniture, and even entire detachable houses by mail order, such as the 'Ashmore' bungalow (1916). Among the various proposals in the catalogue, a dining room with folding furniture, the 'Pullman Breakfast Alcove,' inspired by the railway carriage furnishings of George M. Pullman, who from 1860 had transformed train travel into a luxury experience, enjoyed some success. It is a set of tables and benches, mostly placed below a window inside the kitchen, used as a breakfast nook; when the table folds down towards the wall, it transforms into a daily sitting area or a corner for sewing or reading. (Fig. 4)

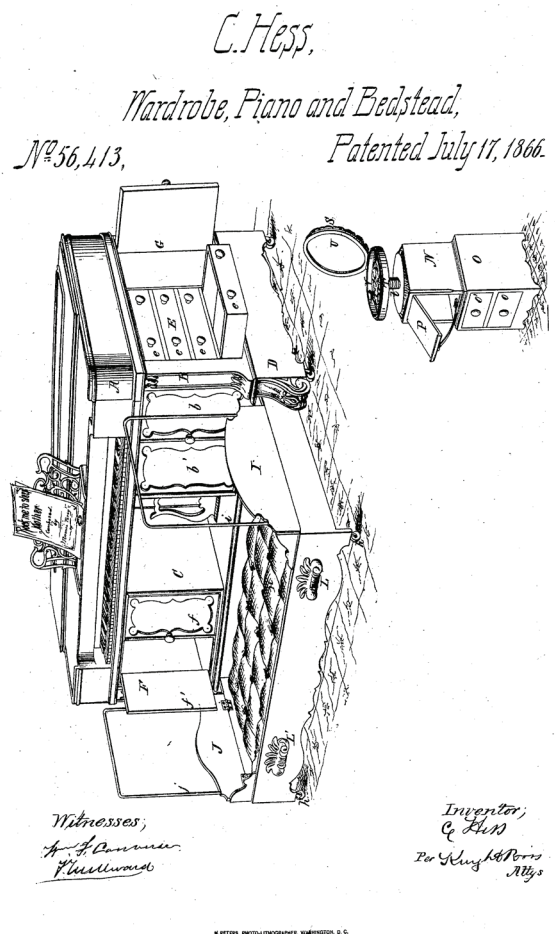


Fig. 3
Detail of Letter Patent No. 56,413 (dated 17 July 1866) for the patent for 'Improved Combined Piano, Couch, and Bureau' by Charles Hess (Cincinnati, Ohio).
(Source: United States Patent Office [<https://patents.google.com/patent/US56413A/en>]).



Fig. 4
The advertising image shows Breakfast Alcove 'The Dawn' with the table open (left) and with the table closed to the wall (right) for dual use of the space as a breakfast alcove or as a daily living room.
(Source: Sears, Roebuck and Co. catalogue [Chicago-Philadelphia, 1920]).

4. THE INTERIORS OF EARLY MODERN ARCHITECTURE

In Europe, the social housing problem first raised the issue of the transformability of interiors, investigated during the 1920s by German and Austrian architects and from the 1930s to the 1950s by their Italian counterparts. While still a student and on behalf of the Stadtbauamt [Municipal Technical Office] in Wien, Anton Brenner designed a building of rental flats with different surfaces at 26, Rauchfangkehrergasse (1924-1925). The two-room apartments are decidedly compressed, with the kitchen only 2.97 m². The most significant degree of flexibility is in the living-dining room, which contains two folding beds ('Klappbetten') in an alcove, the perimeter of which can be screened off by folding panels covered in fabric; the

bedroom, on the other hand, is separated by a wall-cabinet passing through, with storage units accessible on both sides. The cost of these furnishing elements, given to the tenants, is redeemed monthly in the rental fee.

In the same period, the best-known experimentation in room modification was offered by Gerrit Thomas Rietveld in the Schröder Haus (Utrecht 1924). While the ground floor of the house is organised traditionally, i.e., in rooms, albeit small, the first floor (60 m²) lends itself to different uses at different times of the day thanks to a set of sliding panels that close or open the large room, segmenting it into smaller and more intimate ones. This project is a spatial as much as a temporal revolution of the architectural box, as the designer calibrates the space concerning the functions and times of day in which it is used; moreover, the rooms can be continually broken down or recomposed with simple gestures, while maintaining the stable core of the staircase and fireplace.

While the Schröder Haus represents an unprecedented interior solution in traditional construction, Le Corbusier and Pierre Jeanneret work on standardising the building structure - punctiform, with light infill and open plan - through reinforced concrete. This type of house requires containers built into the walls or dividing the rooms, rather than bulky furniture set against the walls, as Le Corbusier writes: 'Je dessine le plan d'ameublement et la coupe d'une chambre traditionnelle. La grande armoire normande, la commode de style ne permettent qu'un mauvais rangement fort inefficace (...). Je dessine en plan et coupe un dispositif moderne: fenêtres, cloisons et casiers. J'ai gagné une place considérable; on peut circuler à l'aise; les gestes seront rapides et exacts; le rangement automatique' [1] (Le Corbusier, 1930, pp. 109-111).

Therefore, the two designers implement the standardisation of the furniture with the idea of 'casiers standard', on which they have been working since 1924: they are multifunctional, modular elements that can be assembled horizontally and vertically. The cases and doors are made of plywood with mahogany veneer [2], with sliding, sluice, or hinged closures (natural or painted in colour); the entire system rests on the floor or is raised off it thanks to slender metal 'pilotis.' Sized exactly on the objects to be contained [3] - from plates to hats, from books to records -, the 'casiers' are in part reminiscent of the office archives or travel trunks admired by the Swiss master in search of a 'comforting norm', i.e., 'an equipment-prosthesis' that responds to all human needs, at least in the field of furniture (Le Corbusier, 1925, *passim*). The 'casiers' are presented in the pavilion of 'L'Esprit Nouveau' at the Exposition Internationale des Arts décoratifs et industriels modernes (Paris 1925) as containers and, at the same time, space dividers: arranged in a plug or flat position, they close it up to a certain height, qualifying the various rooms in different ways according to the function the furniture fulfils (cupboard, cupboard, display unit).

A further experimentation of these multifunctional pieces of furniture is proposed by Le Corbusier, Jeanneret and Charlotte Perriand in the exhibition 'Équipement de l'habitation: descasiers, dessièges, destable' at the Salon d'Automne (Paris 1929). The 'casiers' are used to divide a hypothetical flat for three people of about 90 m² into a service area (kitchen, guest bed, bathroom, double bed), compacted on one side of the perimeter and with a luminous opalescent glass ceiling, and a large living room, with a floor made of Saint Gobain glass plates. Made of brass profiles and closed by metal sheets (painted white, blue, brown, red) or glass, these 'casiers métalliques' function as display cases, double-sided containers (with drawers or pull-out shelves) and separating screens, to which the three authors contrast tables and seats according to their design.

Equally compelling is the proposal for articulating accommodation using fixed and mobile equipment that Le Corbusier and Jeanneret conceived for one of the two residences at the Weissenhof-Siedlung (Stuttgart, 1927). If both buildings concretise the 'Cinq points d'une architecture nouvelle,' theorised by Le Corbusier a short time before, the flats of the Maison Double in steel are conceived as an ample continuous space, interspersed with deep wardrobes (with a horizontal masonry top), from which tubular frame beds (designed by Alfred Roth) and sliding panels emerge to divide the room into two or three independent bedrooms, served by the corridor behind them. In this case, the furniture is an immobile

mobilier, ‘meuble et *non-meuble*, architecture et “sculpture”,’ (Rolland, 2022, p. 30) conceived so that somebody can transform the entire dwelling.

The depth of the wardrobe even becomes an ‘other space’ in the house that Walter Gropius designed for himself and his wife Ilse (called Ise) Frank in Dessau (1925-1926). The couple’s bedrooms are divided by a double-sided container, through which they pass to go from one to the other, as well as housing a shared walk-in wardrobe. Compared to the articulated system of entrances leading to both rooms and the main bathroom, without the two interfering with each other, this furniture divides the couple’s nightly rest and, at the same time, creates an intimate sharing between them. On the other hand, the living room-studio area is separated from the dining area by a simple curtain, while the dining area is in direct communication with the kitchen office through pass-through furniture and doors.

Although Le Corbusier and Jeanneret envisioned the industrial production of the ‘casier standard’ as a modular and variously organisable furnishing system [4], it was in the post-World War II United States that the idea of a multifunctional container that also divides space took on greater adherence to mass development. George Nelson and Henry Wright took this on with their ‘Storagewall’ project (1944), which represented an alternative to a locally made, cost-saving piece of furniture in cheap housing with an industrially produced element. The result of research into the current production of the two young architects for the magazine *The Architectural Forum* (1944) [5], the ‘Storagewall’ is a wall cabinet that overturns the traditional idea of storage, i.e., the wall cupboard. Double-sided, with an aluminium structure, about 20 to 30 cm deep (as opposed to the more common 60-65 cm), the container can replace entire walls of the home. The project thus formalises a ‘new hybrid - not exactly architecture or furniture but with the qualities of both structurally autonomous and solid, but also modular and infinitely flexible’ (Abercrombie, 2000, p. 72). (Fig. 5)



Fig. 5
The advertising image of George Nelson and Henry Wright’s ‘Storagewall’ system illustrates how the container works and the types of objects it can hold. (Source: *Architectural Forum*, (11), 1944).

5. THE ITALIAN CONTRIBUTION

After the II Congrès international d'architecture moderne (1929), which sanctioned the adoption of the *existenzminimum* or minimum quality standard for low-cost housing, room flexibility became an interesting design variable in Europe for social housing and beyond. Italian architects experimented with it from the 1930s onwards in hypothetical projects presented in *Domus* magazine and temporary exhibitions. In particular, the Milan Triennale - with its numerous 'Mostre della Casa' or 'Mostre dell'arredamento' that cadenced its exhibition programme - offered designers frequent opportunities to conceive original visions of living. For our designers 'the term flexibility expresses [their] desire [...] to respond to multiple and contradictory objectives of the minimal dwelling. The more refined needs for comfort, but also the expression of a new "freedom" in dwelling, the aspirations for individual isolation and the needs for family control find in this device (the permutability in the use of limited spaces) the hope of making the inflexible flexible' (Teyssot, 1984, p. 91). The one who first concerned himself with the transformability of the typical dwelling was Gio Ponti, who, in the magazine *Domus* (which he directed), conducted a proper taste campaign for the modern home. In this, furnishings must not have 'a purely formal conception' or one of social representativeness as in the past, but rather fulfil the needs of contemporary life, which 'has as its postulate (a) humanistic and non-mechanical ideal: in the sense of a humanism that is not anti-mechanical, but which has assimilated the machine and its derivatives' (Ponti, 1936, pp. 16-17). At the 6th Milan Triennale (1936), he exhibited a section (living-dining-studio) of a demonstration house that, through different furniture arrangements inside it, responded to various living needs. The two rooms of the installation are separated by a double-sided cupboard containing a sliding panel, which allows for variations in the use of the entire space. However, the architect concentrates more on juxtaposing the furniture - almost all by his design - to create different areas depending on the occasion.

Between 1937 and 1938, on the pages of *Domus*, Ponti then elaborated the idea of a 'flat for everyone,' with furniture that could be disassembled, folded, and sent anywhere, particularly to the colonies of the proclaimed Italian East Africa. The first published plans were by Alessandro Pasquali, who also published the executive design of the furnishings, while the idea that 'every room closes into a piece of furniture' (*Domus*, 1938, p. 42) was entrusted to the firm of Giovanni Berardi with drawings by Pier Nicolò Berardi. The furnishings (two bedside tables, a chair, and the backs of the bed) are disassembled and folded to be contained inside a cupboard or (four chairs and a table) a sideboard. In this way, the packaging is eliminated, shipping is simplified, and furniture assembly is carried out with only a screwdriver.

The 'house inside the cupboard' theme was finally relaunched between 1943 and 1945 by Ponti himself, assisted by the Saffa company for production (but the furniture did not actually go into production). If the architect looked to the catalogue sales that had dominated the furniture market in the United States since the end of the 19th century, in Italy, a solution to the wartime housing problem seemed to him to be offered by modular, foldable, concealable furniture. In other words, the transformability of the home now replicates the inevitable displacements of Italian families from destroyed cities or impracticable real estate rather than their moving abroad.

In the same period, Gian Luigi Banfi, Lodovico Barbiano di Belgiojoso and Enrico Peressutti also worked on flexible furniture [6]. For the living room of the T. flat (Milan, 1943), they designed a bookcase with a pull-out dining/working table, which could also be detached altogether and left isolated in the room, while the bedroom for three girls was transformed into a playroom/study by turning the beds back on themselves and switching them into furniture and shelves. However, these solutions rely on skilled artisans, for which industrial production is not feasible.

In the immediate post-war period, research continued above all on folding and concealable furniture, which, while aspiring to standardisation, were proposed above all as furnishing

solutions for small accommodations (Ignazio Gardella, accommodation for three people, 1946; Tullio Bussi, accommodation for one person, 1946; Eugenio Gentili Tedeschi, flat for two people, 1946), while Marco Zanuso founded the INA-mobile in 1954, a section dependent on the INA-casa, to reduce the number of tenants' furnishings as much as possible, to be replaced with fixed furnishings for social housing.

In general, however, Italian projects questioning the flexibility or transformability of the dwelling seem to be based on three main invariants: the equipped and modular wall, the mobile diaphragm, and the object-environment, which respectively investigate not only different ways of organising and using space but also stand out as responses - gradually more daring - to changes in Italian society. In other words, they mark the gradual passage from a traditional style of living towards more informal forms of living until establishing countertrends so futuristic that they could only be understood in the following decades. If the first two solutions seem in part to rework the influences of pre-war European rationalism and seek, at least in the first hypothesis, 'the transformability of environments even without creating "exceptional" solutions' (Feraboli, 2015, p. 175), the last one rises to an innovation with an all-Italian imprint.

5.1. The equipped and modular wall

At the 6th Triennale (1936), Franco Albini with others [7] presented an accommodation for one person (or hotel room), whose large room was articulated around a single container, which did not reach the ceiling but separated the space into day and night areas. More complex is the solution of the same architects [8] in the rental accommodation for four people, set up on the same occasion. The entire 160 m² flat, intended for a wealthy class, is governed by a rigid modular grid (66x66 cm), which determines the equipped walls and light glazed filters, totally replacing the walls, for the only room of which the house is composed: even if the economic problem is less relevant in this case - the designers write -, that of the exploitation of space remains 'in all its importance, mainly because of the more complex habits of life which multiply the number and types of objects of use, and which require spaces suited to different occupations' (Domus, 1936, p. 27). Ample relevance is given to the living room, which becomes the central core of the residence, while the bedrooms and bathrooms are recorded on smaller dimensions. The kitchen is divided into office and preparation areas by a transparent diaphragm with a Cartesian rhythm, reflected in the cadence of the storage units, thus composing an airy spatial grid. (Fig. 6)



Fig. 6
Photograph of the kitchen by Franco Albini, Renato Camus, Paolo Clausetti, Ignazio Gardella, Giuseppe Mazzoleni, Giulio Minoletti, Gabriele Mucchi, Giancarlo Palanti, Giovanni Romano, for Flat No. 2 for 4 people. The Flat is presented in the 'Mostra dell'abitazione,' exhibition, at the 6th Milan Triennale in 1936. A glazed, modular diaphragm divides the office from the preparation area.. (Source: Archivio Triennale di Milano (Courtesy of)).

Throughout the 1950s, the fitted wall, custom-designed and generally made of wood, became a feature for homes intended for a more straightforward way of living. This design was proposed by Margherita Bravi and Luisa Castiglioni, who set up a modular furniture system at the 9th Milan Triennale (1951). Instead of walls, such furniture separated the kitchen from the dining room, the study from the living room, and the bedroom from the dressing room. All elements are made of solid wood, also used for the frames, with plywood bottoms and doors covered in coloured plastic laminate. Although the storage units are proposed as fixed, Bravi and Castiglioni's solution offers various interpretations of the composition and use of the living space.

5.2. The movable screen

The idea of a room partitioned by light and movable partitions, such as fabrics, has precedents that go back a long way in time (think of the spaces of the classical age or the bed with independent curtains): draperies of various thicknesses and qualities were used to close off a large room, to shelter from the cold or to create greater intimacy. This type of solution was taken up by Italian architects, especially during the 1950s and 1970s. Gianfranco Frattini makes elegant use of fabric in the furnishing of a flat in Bergamo (1955): thanks to a circular structure hanging from the ceiling, a heavy curtain unravels in the large living room, alternately enclosing it in a more intimate area and creating variously equipped corners (parlour, dining, study) or merging them into a single space. (Fig. 7)



Fig. 7

Gianfranco Frattini, Flat in Bergamo, 1955, detail of the living room with the movable curtain closing off a more private area for conversation. (Source: Studio / Archivio Gianfranco Frattini (Courtesy of)).

The 'folding' wall also becomes frequently used to modify the home. Presented as a minimal solution for one person at the 10th Milan Triennale (1954) by Ponti and others [9], in the 1956 the 'alloggio uniambientale' [uniambiental flat] project was extended for four people until it became a hypothesis to be adopted in an entire residential building. The ample space of which the flat is composed can be transformed into smaller ones thanks to a series of mobile diaphragms, yellow on one side and blue on the other. They are 'accordion screens,' allowing one to view the house from one side to the other or to create a 'mobile labyrinth,' while the kitchen and bathroom are reduced to the essentials: 'the spaces are clear (...). And the furniture is few and light' (Domus, 1956, pp. 77-78).

The primary view is oriented towards the ‘finestra ardata’ [furnished window], presented by Ponti in 1954: a complex visual system composed of furniture, equipment, panes and light cut-outs; it is a primary/secondary structure of the dwelling, depending on whether one looks at it from the inside or the outside, and which changes during the day as well as at night. Ponti shortly afterwards implemented the concrete realisation of these ideas in his own 160 m² flat in Via Dezza in Milan (1956-1957), a sort of taxonomic collection of what the architect presented in the exhibitions or in *Domus*, with which he exhibited a different way of living: modifiable according to use, day or night, moments of isolation or conviviality among its inhabitants.

The architect finally takes up the idea of a continuous but transformable domestic space, apart from the toilets concentrated on the perimeter, with ‘La casa adatta,’ an exhibition at Eurodomus 3 (Milan 1970) (Fig. 8). Here, the transformability of the architectural interior is entrusted to large folding diaphragms, with total opening, and to harlequin-type furnishings that can be moved on wheels to generate ‘a domestic landscape freed from oppressive conventionalisms, a livelier way of living’ (Ponti, 1970, p. 17), in which people can freely express their lifestyle. In this way, Ponti ‘proposing this as a method proposes a custom: a way of living in a “versatile” space, in which furniture is light, mobile, foldable’ (Licitra Ponti, 1990, p. 248). Among the most interesting transformable furniture is the two-seater mini-desk with built-in chairs, the table extendable from four to ten seats and the sofa-bed on wheels (‘Apta’ series, made by Walter Ponti).

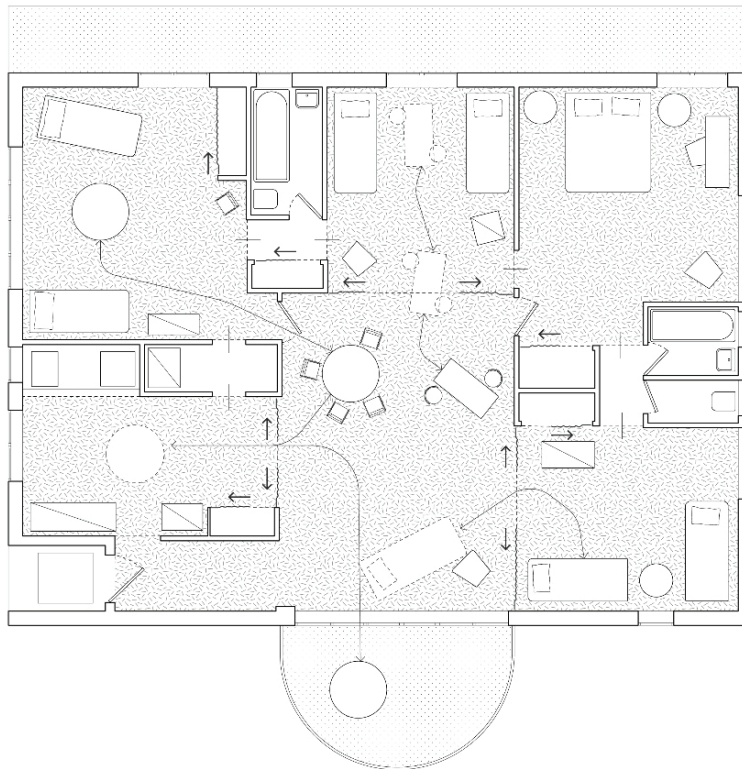


Fig. 8
Redrawing of Gio Ponti's 'La casa adatta' presented at Eurodomus 3 (Milan 1970), in which the movements of the furniture, room entrances and sliding walls are highlighted. Redesign by Valeria Colombo and Gianluca Rizzotti under the supervision of Prof. Michela Bassanelli.
(Source: Michela Bassanelli's Archive (Courtesy of)).

5.3. The object-environment

From the late Sixties to the early Seventies, the most original contribution of Italian architects on the transformability of the home was offered by the paladins of ‘antidesign’ (Colombo, 1969, p. 28), as opposed to the furnishing product chosen from the catalogue and inserted at the end inside the home. Joe Colombo and Ettore Sottsass responded to the libertarian

instances of a changed society with projects that distanced themselves from the wall perimeter to offer themselves as poles around which the domestic environment and human activities coagulated.

At the 13th Milan Triennale (1964), Colombo presented a kitchen on wheels, which could be moved anywhere and in which the necessities for cooking, including electrical appliances, and for setting the table for six people were reduced to a cube (75x75x90 cm) made of plastic-coated ash mounted on wheels. The 'Minikitchen' (made by Boffi) assumes a home that is no longer organised into specialised places by function, such as the kitchen, but is available to be lived in informally: it 'frees man from "place" and "time" by following him in space and revealing the aspect of conviviality during cooking' (Favata & Borgatti, 2015, p. 345). (Fig. 9)



Fig. 9

The prototype (Boffi) of Joe Colombo's 'Minikitchen' was presented at the 13th Milan Triennale in the exhibition 'Sezione Momenti di tempo libero: gli hobbies,' 1964. The picture shows the mobile kitchen open and with the utensils it can hold in view.
(Source: *La rivista dell'arredamento*, (17), 1964).

For the installation 'Visiona 1' at the Interzum Show (Cologne, 1969), the architect instead conceived a flat as a large void in which a block-living room, a kitchen-table, and a bathroom nucleus connected to a circular bed-cabinet are freely arranged, while at Eurodomus 3 (Milan 1970) he proposed two prototypes of transformable furniture, the 'Cabriolet-bed' and the 'Rotoliving', a wall-kitchen with a rotating table (made by Sormani), with which Colombo later furnished his Milanese flat in Via Argelati. In the latter two cases, the furniture is fixed but conceived in such a way as to modify itself and, consequently, change its relationship with the architectural space and people. Finally, as part of the exhibition 'Italy: The New Domestic Landscape' at the Museum of Modern Art (New York, 1972), Colombo once again concentrated the main functions related to living in four blocks (Kitchen, Cupboard, 'Bed and Privacy,' and Bathroom) which, condensed into just 28 m², make up the 'Total Furnishing Unit.' The elements can be arranged differently in the room according to the needs of the inhabitants and, in some cases, take on more than one function (the sleeping

block can, for example, be used as a living room), presenting a more dynamic way of living that is constantly changing.

In the same New York exhibition, Ettore Sottsass presented the 'Microenvironment,' a living system developed through a kind of container: these are grey fibreglass modules, 30 cm deep, mounted on wheels and hinged together, which contain a wardrobe, kitchen, sink, refrigerator, pull-out table and more. The various activities associated with living are thus assigned to individual objects freely scattered throughout the space. Depending on their composition, they determine a variable domestic landscape, the result of the desires and empathies of the moment: 'The idea,' Sottsass writes in this regard, 'is that the furniture can move closer to or further away from each other, or rather, that one who lives in this furniture can move it closer to or further away from himself or his friends or relatives when he feels like it. So that each one as a private individual or each one as a representative of a group can manifest with the furniture states of his solitary adventure or the adventure of the group because the states, the needs, the dramas, the joys, the illnesses, the births and the deaths also take place in space, they move like sea beasts that shrink or widen to the right or the left, up or down, they coagulate or soften into plankton and so on' (Sottsass, 1972, pp. 162-163).

6. THE CONTEMPORARY PROJECT

In the present day, the transformability of the dwelling continues to be investigated, albeit mainly with accents of uniqueness rather than replicability for all. It is the case of the 32 m² home in Hong Kong that Gary Chang renovated for himself, and initially for his own family (5 people and a tenant), over about thirty years, starting in 1976. From the first partitions in light partitions separating the personal rooms from a 'living corridor,' the architect moved on to increasingly evanescent divisions, even in fabric, until he conceived a single, accessible space with wall fixtures that, sliding in on themselves, conceal the kitchen, the walk-in wardrobe, and the bathtub. It is a project of total integration between furnishings and architecture, responding to the building compression of eastern megalopolises with a house in continuous transformation despite the narrowness of its surface area.

In his various flats of the Hinged Space Housing complex (Fukuoka, 1989-1991), Steven Holl transforms the interior by linking up with the Schröder Haus. Still, compared to the latter, his wooden panels do not slide but rotate on themselves thanks to a set of hinges, expanding the spaces during the day or reducing them at night [10]. LOT/EK (Ada Tolla & Giuseppe Lignano) also transformed a 210 m² commercial loft (New York, 1996) into a studio-house using the pivoting rotation of aluminium-clad counter walls, which conceal the bedroom or kitchen. By rotating or shifting equipped containers, on the other hand, the Spanish studio PKMN Architecture manages to provide different configurations for small flats: as the MJE House (Salinas, 2014) or the 'All I Own House' (Madrid 2014) (Fig. 10).

Fig. 10

Lot/Ek (Ada Tolla & Giuseppe Lignano), Miller Jones studio-house, New York 1996. In the picture, the pivoting aluminium-clad counter walls separating (and concealing) the sleeping area from the living room-studio are visible.

(Source: photo © Paul Warchol, reproduced courtesy of Lot/Ek studio).



While these space-modifying solutions were almost an exception in the contemporary residential scene until a decade ago, they have recently been proposed to the public under the motto: 'We create Expandable Apartments' [11]. A trend has been identified for metropolitan cities with very high costs for renting or buying a house that allows one to multiply the available square metres through customised transformable furnishings. Although this is an economical operation (mostly of doubtful spatial value) on a large scale, mainly referring to an affluent clientele and which does not change the dwelling, it highlights a problem: the relationship between quality of space, cost and surface area, which is increasingly impractical for many people.

On the other hand, the forced confinement due to the recent pandemic has highlighted the limitations of flats with limited dimensions or without adequate organisation of the rooms because they are not suitable for several people to live and work together for long periods. One response to the day-to-day difficulties imposed by pandemic confinements may be that of a domestic space that can be adapted to different usage needs (study, work, sleep, etc.) or can be subdivided by means of transformable furniture, sliding walls or curtains, and other 'custom-designed' furniture devices.

7. CONCLUSION

The essay briefly traced a history of furniture that non-permanently modifies the domestic space, emphasising the innovative contribution of certain architects and designers, especially from the 1920s to the present. In most cases, the case studies reported represent design 'exceptionalities:' that is, they represent solutions created ad hoc to solve the home's transformability problem. They are either elitist furnishings (see Gianfranco Frattini's project) or proposals - some have remained on paper - for temporarily subdividing small dwellings or solutions developed as demonstration exhibits in housing exhibitions. Only in a few cases - for example, Gio Ponti's project of a 'house inside the cupboard' or the 1972 experiments of Joe Colombo and Ettore Sottsass - did the proposals imply the idea of being able to mass-produce transformable furniture.

Although the idea of transformability through furniture has only sometimes been considered in home design, it represents a highly topical design theme. It can be an appropriate response to emergencies, such as the COVID-19 pandemic that has forced people to live together constantly in small dwellings, but also to a real estate market that, especially in large metropolises, offers increasingly smaller dwellings at higher and higher prices.

Thinking back to past experiments should allow today's planners to consider that the latter

may change over time according to different needs from their first formulation of the house project. Homes could be equipped beforehand with specific transformable furnishings or light partitions that allow the interior space to be modified and used in various ways should there be a need for greater privacy or to accommodate guests. The case studies considered show how this can be possible, for the most part, even at low cost, but only if there is, from the beginning of the design of the dwelling, an idea of organisation of the interior space that is neither prefixed nor immovable. In the ridge between the commercial practice of space exploitation and the new needs for cohabitation concerning possible future contagions, alternatives must be sought that take up the lessons of the past of transformation and adaptability of the home to build new models of contemporary living.

CONFLICTS OF INTEREST

No conflicts of interest.

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NOTES

[1] 'I'm drawing the layout and cross-section of a traditional bedroom. The large Norman wardrobe and the traditional chest of drawers provide poor, inefficient storage (...) I draw a plan and cross-section of a modern layout: windows, partitions, and lockers. I've saved a considerable amount of space; you can move around at ease; your movements will be quick and precise; the tidying will be automatic' (transl. by the author).

[2] Originally, they were to be made of metal, but the pavilion displays wooden prototypes made by Bouffert in Paris.

[3] The measurements specified by Le Corbusier for a 'casier' are width and height 75 cm, depth 37.5 to 50 cm; or 150 and 75 cm, depth 37.5 to 75 cm.

[4] This was possible in the 1970s thanks to the Cassina furniture company (Meda, Italy) and the studies by Filippo Alison.

[5] It was produced in 1945 by Storgewall, Inc., New York, and exhibited in the same year at the Macy's department store in New York.

[6] Ernesto N. Rogers is not accredited due to the racial laws in force in Italy at that time.

[7] Franco Albini, Renato Camus, Paolo Clausetti, Ignazio Gardella, Giuseppe Mazzoleni, Giulio Minoletti, Gabriele Mucchi, Giancarlo Palanti, and Giovanni Romano. Gold Medal Award.

[8] Gold Medal Award.

[9] Gio Ponti, Gian Franco Frattini, Alberto Rosselli, and Antonio Fornaroli.

[10] Holl (1996, 18) refers to traditional Japanese fusuma for organising the rooms of twenty flats in the building complex.

[11] From the presentation page of Ori Design Studio, New York: www.oriliving.com [Accessed 4 April 2023].

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Reference According to APA Style, 7th edition:

Forino, I. (2024) Transformable furnishing: from ‘modern home’ to contemporary house. *Convergências - Revista de Investigação e Ensino das Artes*, VOL XVII (34), 157-173. <https://doi.org/10.53681/c1514225187514391s.34.262>



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