ON THE INVISIBLE IN LIGHT - HOW SURVIVORSHIP BIAS DISTORTS OUR IMAGE OF SUCCESS IN CONCERT LIGHTING DESIGN

Those who oversee major productions, maintain a presence on tours, give interviews, professionally stage themselves on social media, or collaborate with producer brands are often perceived as successful. But what criteria shape this image, and who never appears in it?

Survivorship bias is a cognitive misjudgement as prevalent in statistics as it is in everyday perceptions of success. It occurs when we consider only the cases that have survived a particular selection process - and then draw conclusions about the totality. In doing so, we conveniently forget those who did not survive this process - in both literal and figurative senses.

A classic example: mathematician Abraham Wald analysed bullet holes in aircraft during the Second World War. The logical conclusion: armour should be reinforced where the impacts were found. However, Wald identified the fallacy: these aircraft had survived - the impacts at these locations were therefore not decisive. The truly dangerous impacts were located where none could be seen - because aircraft struck at these points did not return. This is precisely the logic of survivorship bias: we analyse what is visible - and draw false conclusions about success, quality, or causation. And exactly this occurs in the influential segments of the events industry.

Formats such as "Lichtgespräche" (Light Conversations) actively contribute to this distorted image. Usually, established lighting designers are given a voice there - ideally those working with established products from lighting manufacturers.

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Thus, success is not only personalised but also directly linked to brand loyalty. This is not only questionable in terms of content but also separates the activity of lighting design from its actual creative, social, and technical responsibilities.

It becomes particularly problematic when success stories and product references are mixed in emerging talent programmes - with the result that certain perspectives are systematically strengthened whilst others are never made visible. That technical basic knowledge - such as safe handling of equipment and maintaining safety distances - is not always adequately conveyed in some development programmes was calculated using concrete production examples in a webinar as part of the Workspace Lichtbaukunst (Light Construction Art) of the isdv e.V. Such cases point to structural challenges in the area of pedagogical responsibility and leadership within emerging talent development.

Furthermore, criticism rarely takes place in public. At Eurovision, for example - one of the most media-visible productions of all - there is no public discussion about ecological aspects, energy consumption, or technical safety issues. This absence of debate resembles a stage where the scenery constantly changes, but the actual rules of the game remain invisible. Those not looking closely hardly notice that little changes in the power and interpretative structures.

Those who participate hold back; those standing outside criticise only in whispers. For whoever speaks loudly risks not being asked at all, or not being asked again in future.

Isolated attempts to reverse the usual narrative - for instance, by deliberately reporting about failures instead of successes in public formats - have so far found little resonance. Such perspectives often do not fit the media format designed for high gloss and presentability. In the logic of survivorship bias, they simply do not seem to be provided for.

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A comparable phenomenon exists in science: generally, only works whose hypotheses are confirmed are published. Studies with inconclusive results remain hidden - not because they are irrelevant, but because the system couples visibility with success. Here too, survivorship bias operates: it obscures what does not fit and strengthens what integrates into the existing image.

This text itself is caught in a dilemma: on one hand, it criticises the silence in the industry, the avoidance of criticism, and the conditioning towards conformism. On the other hand, it remains in suggestion, refrains from complete names, avoids clear attributions. This occurs not from opportunism - but from the desire to make systemic problems visible without exposing individuals. Criticism of structures is often only effective when it attacks not the persons but the patterns.

Here too, the analysis risks generalising structures where differentiation would actually be necessary. But precisely therefore, it is worthwhile to make the mechanisms visible without tarring every actor with the same brush. Particularly where power relations are diffuse and responsibility is shared, a language is needed that differentiates - and does not scandalise.

An alternative understanding of success in lighting design should focus more on content than on visibility. Success materialises where design becomes meaningful - whether through a clear conceptual idea, precise technical implementation, social responsibility within the team, or considered use of resources. Visibility can be a result - not a substitute for it.

Instead of linking success exclusively to reach, production size, or brand loyalty, alternative indicators should be given greater importance: for example, the ability to lead a team, plan safely, recognise technical risks, assume creative responsibility - or find creative solutions with limited means.

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Sustainability, social sensitivity, and the capacity for critical self-reflection also belong to the qualities that constitute professional lighting design in the best sense of the word - regardless of whether it appears on the cover of a trade magazine or not. The profession of lighting creator is not only about creativity. To function in a crew, live in confined spaces, and assume responsibility, one needs leadership qualities, character, and social intelligence. Yet none of this is tested. There is no examination of teamwork ability. In no interview is one asked about unresolved conflicts. Training formats often promote exactly the opposite: adaptation, product knowledge, system proximity. Those who wish to belong must fit in - into the rules, into the consideration, into the shared coexistence. This sounds like community but often means: remain silent, tolerate, function. The capacity for critical thinking is thus not rewarded but perceived as disruptive.

A professional association would actually be predestined to openly address such blind spots. It unites professionals with very different experiences - also beyond media attention. Nevertheless, its positioning often remains discrete. Perhaps from diplomatic caution, strategic considerations, or because one belongs to those structures that require critical reflection.

In the world of event production, there are many creative roles, from stage design through media art to sound design.

However, the professional reality of lighting creators differs significantly from other creative areas in many respects. Whilst set designers and directors are institutionally integrated into theatre operations, often with academic training, fixed project structures, and clear autonomy, lighting creators generally move in a hybrid field between technology and art - often as freelancers, without institutional protection and with high performance pressure within their industry.

In hardly any other creative professional field is proximity to the product world as dominant and diverse as in lighting design.

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Many lighting creators must engage not only with design questions but also with equipment selection, system integration, and product-related specifications. This proximity to technology is often sold as an advantage - in reality, however, it blurs the boundaries between artistic autonomy and economic dependence.

Compared to media artists who work freely, think installatively, and often consciously break out of commercial frameworks, lighting professionals on tours and major productions are under enormous pressure to function efficiently, safely, flexibly, and within a compromise with the system.

So far, these structural differences have hardly been addressed in discussions about professional profiles. Yet precisely this comparison would be necessary to understand what lighting design means today - and what professional and personal competencies it actually requires. Lighting creators often work under precarious working conditions whilst simultaneously operating in a system that presents itself as technologically progressive and creative.

Major productions such as stadium tours, festivals, or media-effective television formats follow a clear hierarchy: at the top is the management of the artists, followed by production management, technical management, the trades - and within these, lighting design.

Creative autonomy depends heavily on budget, the production's trust, and willingness to take a creative risk. Those who are visible have often already overcome many hurdles - those who fail usually disappear quietly.

The silent role shift within the industry is also a significant influencing factor: in recent years, we increasingly observe that persons who originally had hardly any visibility or creative relevance in the professional field now appear as brand ambassadors or industry representatives - usually under the guise of professional neutrality.

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These are by no means the most successful or pioneering lighting creators, but often those who never received a proper stage - and whose new role now again enables orientation, although their own professional success has been rather marginal thus far.

These industry representatives appear independent externally, yet they actively participate in the substantive design of development programmes, training courses, or professional associations - often in collaboration with persons who likewise have little practical experience with lighting design. When two pseudo-neutral systems - industry and association - combine substantively, a double filter emerges: a training structure shaped by those who never distinguished themselves creatively but now establish norms and models. This is not only a question of responsibility - but also of legitimacy.

This interweaving of industry and association work creates not only a substantive imbalance in the professional training debate but also affects the public sphere. Where key actors are part of close relationship networks, what is actually told shifts - and how.

Market-oriented publications of the trade press are an important amplifier of the distorted image of success. In Germany, they are heavily dependent on industry - not only financially through advertisements but also conceptually through substantive expectations: high-gloss productions, major brand cooperations, spectacular technical effects. Small productions or critical perspectives have hardly any chance in this system - they rarely receive an echo as they bring neither reach nor advertising budget.

A large part of the trade press is therefore not independent but conditioned. It delivers a high-gloss image based primarily on visibility, size, and innovation rhetoric - and not on creative depth or critical debate. Yet it would be precisely the task of a free trade publication to make contradictions, conflicts, or discrete voices visible. But even when established trade media attempt to undertake deeper reflection, the depth often remains limited.

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The structural proximity to industry, to the protagonists of the scene, or to their own economic base - whether through advertising revenue or click numbers - leaves hardly any room for independent criticism. The boundaries between journalistic analysis and industry marketing are fluid.

This substantive pre-selection in the trade press finds its digital echo in social media. There too, not necessarily the most relevant contributions shape discourse, but those that best fit the existing image - or confirm it in entertaining form.

A similar pattern can be observed in social media, albeit in different form. Many contributions from the environment of the events industry - particularly in the area of lighting design - follow a rather entertaining and rough tone. There is reporting, commenting, and ironising. However, genuine meta-reflective engagement with the professional field, its dynamics, contradictions, or power structures remains the exception. Those who reflect lose visibility. Those who entertain amusingly remain in the game.

The need to stage one's own presence and convey a stable self-image externally often outweighs the desire to objectively address concrete problems. From a sociological perspective, this behaviour follows a logic of symbolic capital: visibility, recognition, and belonging become a currency that counts more than direct professional exchange. Digital spaces originally conceived as places of collective knowledge building thus transform into stages where self-presentation dominates. This mechanism reinforces already existing visibility hierarchies and contributes to critical or solution-oriented contributions drowning in a flood of self-referential content.

This is not an individual weakness but the expression of a system that does not reward self-reflection - but rather marginalises it. In an industry that lives from visibility, there is hardly any space for reflection. And even those who dare risk losing themselves in the fast pace of platforms.

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Precisely here the "BeatsandButtons" festival planned by the ZentrumNeueLichtkultur (Centre for New Light Culture) begins. Conceived as a platform for young lighting creators and sound artists, it should give them the opportunity to send their first public "ping". Unlike established formats, this is not about brands, reach, or image, but about artistic development, diversity, experimental spirit, and voice.

The festival's supporting programme should specifically convey content that has not yet arrived in the professional public: the conditions for professional entry, the relationship between visibility and design, the influence of technology on art - and the structural reasons why many voices in this area are never heard at all. This substantive orientation is no coincidence - but expression of an institutional self-understanding. The ZentrumNeueLichtkultur is thus far the only institution in Germany that can develop and publish such perspectives independently. There is no economic entanglement with industry, no dependence on advertising clients, and no tactical consideration for market participants.

This autonomy is the foundation for a reflective, critical, and simultaneously constructive view of the professional field. Thus emerges a space that goes beyond mere documentation. A space where questions can be asked that are not asked elsewhere - and where artistic and social positions can exist alongside each other. Not as provocation, but as necessary expansion of discourse.

A structural challenge arises when professional associations work closely with industrial companies. This becomes particularly noticeable when personnel overlaps occur - for example, in working groups for developing professional training. When representatives of company-affiliated development programmes significantly steer such processes, this can raise questions about independence, professional anchoring, and the quality of the training concept. It is not unusual for such working groups to be led by persons who themselves have no direct professional background in practical lighting design or related activity areas. This raises questions about the substantive depth and practical orientation of such developments - particularly when it comes to deriving recommendations for professional training and professionalisation.

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This close connection between commercial actors and professional-political design is not necessarily illegitimate - but it must be named and critically contextualised. When the same actors who could not establish themselves in industry become apparently neutral representatives through development programmes and professional associations, roles and interests blur. What appears as professional knowledge is sometimes the desire for visibility in new guise. Particularly when such figures additionally participate in committees that shape official educational processes or discussions about professional training, an irritating picture emerges: influence grows - although professional relevance is hardly comprehensible. What results is a complex mixture of biographical ambition, institutional representation, and structural intransparency.

When professional associations assert the necessity of a professional profile without previously evaluating the actual need on a large scale, for example through a large-scale cohort analysis, it is the task of an umbrella organisation to critically examine the definitions formulated therein. Otherwise, there is a great danger that the particular interests of a small influential group gain disproportionate importance. In such cases, one should not hold back but actively act to prevent the instrumentalisation of one's own structures.

The planned professional training initiative "Lichtbaukunst-Stellwerker" (Light Architecture Art Operator), which is to be initiated by the ZentrumNeueLichtkultur and developed in cooperation with an umbrella organisation, stands in contrast to such developments. The initiative does not understand itself as a static definition of a professional profile but as a learning system based on data collection and critical analysis - and specifically considers survivorship bias.

The Light Architecture Art Operator initiative does not ask who is already visible, but: Who has not yet been heard? What experiences are missing? What perspectives must be supplemented to train lighting design realistically, diversely, and forward-lookingly?

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Besides substantive questions, organisational openness is also in the foreground: instead of limiting oneself to establishing norms within one's own environment, cooperation with experts from disciplines such as sociology, pedagogy, organisational development, and leadership should be specifically sought. Thus, training could be created that not only conveys technical competencies but also strengthens social and interpersonal competencies and thus regards lighting design as part of a larger cultural educational space.

In this context, it would be sensible not to base training programmes only on individual cases or already successful career paths but on systematically collected and broadly based data foundations.

Only thus can a realistic picture of actual needs and available competencies be gained. Applied to lighting design, this means that planned training offerings should not only reproduce existing success stories but should orient themselves to the actual requirements, challenges, and potentials of the professional field.

It is not only about content but also about structural opening: away from pure self-definition by the scene towards interdisciplinary dialogue. The initiative also specifically includes experts from other areas such as sociology, pedagogy, organisational development, or leadership. For the training of lighting creators should not be conceived solely from within the industry but must be understood as a complex educational field anchored in society.

Furthermore, the initiative pursues a long-term perspective. It is not about quick implementation but about a professional understanding that will persist over years or even decades. It is not based on anecdotes or media images but on systematically collected data. The initiative wants to capture for the first time what real working conditions prevail, what competencies are needed - and what grievances exist. Instead of connecting success with visibility, this initiative aims to connect design with attitude, teamwork ability, leadership culture, and reflective capacity.

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It recognises that relevant understanding for professional education can only emerge when those who fail, give up, or reorient themselves are also questioned. Only thus can one understand what the profession really requires and what makes it liveable.

An enlightened society must be prepared to make failure visible as well. Sociology has long known how much systems tend to suppress deviations. But in the events sector, not only failures are concealed but also simplicity. There is no structured data collection on the number of spotlights, systems, or power generators deployed at events.

There are no industry-specific considerations of the relationship between quantity and design necessity. And there is no systematic analysis of actual energy consumption, for example, of mobile diesel generators that often must be present twice for redundancy reasons.

Why is this so? Is it due to disinterest? Lack of assessment of relevance? Or is it - and this is a cynical but legitimate consideration - because one can thus avoid an uncomfortable truth: that success in this area often rests only on two factors - quantity and technological currency.

Those who have a sufficient number of devices and use the latest equipment are considered competent, modern, and visible. Detailed data collection might show how banal many decisions in lighting design actually are. That many productions are rather the result of a material battle and less arise from a design draft. And that this is perceived in the industry not as a contradiction but as the norm. Perhaps that is why measurements are not taken. Perhaps the silence about the simple is part of the system.

This ambivalence also shows in dealing with publicity. Humorous, rough, or entertaining tones dominate social media - often superficial, rarely reflective. Deeper engagement with professional everyday life, its contradictions, or its need for change hardly takes place. And when it does succeed - for instance, in professional contributions or articles - it often remains on the surface.

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For here too, mechanisms of dependence operate: on click numbers, on industry partnerships, on the fear of taking oneself out of the game through too much criticism.

The ZentrumNeueLichtkultur is distinguished by an independence rare in the events sector. Without connections to manufacturers, sponsors, or institutional clients, it can conduct a debate that does not orient itself to market logic.

This freedom enables it to observe developments in the industry with great analytical depth and treat topics that are neglected elsewhere. Instead of sociable networking, the institution of lighting creators focuses on long-term knowledge transfer, critical thinking, and the connection between artistic practice and social responsibility.

A serious continuing education culture should begin precisely here. It should question not only the successful but also the overlooked. It should analyse structures, uncover motivations, and bind design again to content - not to inventory. Only then will lighting design become a professional field with substance and not only with LUMINOSITY.

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