Theme : B. Sustainability in Planning and Technology
Sub Theme :
B.1 : Sustainable Development Goals and Urban Planning
B.4 Infrastructure for Health and Wellbeing

Current Need for Transformation of an Urban Open Space in Case of Nagpur City:
Urban Happiness through Architecture and Urban Design for Wellbeing

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Abstract:

Urban happiness is a concept that offers residents of a location a favorable perception, which motivates them to stay there for an extended period of time and decide to go back there for the same experience. It has always been fascinating to quantify subjective wellbeing or happiness, and with the introduction of the Gross National Happiness (GNH) index of Bhutan and the World Happiness Report (WHR) by the UN, it has become even more of a worldwide concern. As a possibly more accurate indicator of a country's development, happiness is increasingly being discussed on a global scale. 18% of Nagpur, known as the "Garden City of Maharashtra," is covered in forests and crops. It has a municipal area of 220.8 km2, making it the second capital of Maharashtra. With 2.398 million inhabitants, it is the third-most populated city in Maharshtra State. Its population density is 11,000/km2. It is also known as "Zero Mile City" because it is almost in the geographic center of India. In the present, empty lots are being developed into layouts. There is no set rule for how new open areas must be included. The cramped old city is become increasingly western and cramped. Nagpur is growing in complexity. Since there are no such places to socialize, this is causing a dilemma for the citizens. Even the well-maintained open spaces have their share of overcrowding and underused or abandoned areas. There is no equilibrium between the number of users and the available space. As a result, this study paper uncovers a direct policy-making strategy from literature reviews and a field investigation of Nagpur's current park and open space situation. As a result, there is a need for policy making and a sustainable design guideline approach for the city's urban happiness.

INTRODUCTION

Senses are part of everyday life and the sensory experiences from having lived in a place allow people to remember the place in a pleasant and distinctive way Through the analysis of places, a more detailed and qualitative interpretation of the city is arrived at. This is not circumscribed to its aesthetic essence, or even to its physical geometry. The functional and symbolic interpretations of the elements of a place are the fundamental factors for understanding its meaning. In addition, "as society changes, so does signification. Meanings attached to the built environment become modified as social values evolve in response to changing patterns of socio-economic organization and lifestyles.Nearly 5% of Indians suffer from mental illness with one in five requiring mental health counseling. By 2025, 38.1 million years of healthy life will be lost to mental illness in India.Nagpur: Increasing stress, pollution and changing lifestyle are taking a toll on the people. There has been a spurt in mental illness like anxiety disorders, depression, eating disorders, personality and psychotic disorders including schizophrenia, as per the figures released by central government's Health Management Information system.. Happiness brings about improved physiological functioning in humans, improves capacity to combat stress, pain and lengthens life span.Nagpur, the garden city of Maharashtra is lacking an open space development framework whichhas pulled back the city's open space development. A city enjoying 18% green cover is stillexperiencing citizenunsatisfaction in the field of parks and open spaces due to the lack of anyorientation for open spacedevelopment because of that The purpose of this research is to identify the issues related to parks and open spaces in Nagpur cityand give suggestions on how to improve the situation with new policies and proposals to transform a open space for a urban happiness. The Research included a city-wide survey of all the parks and open spaces in the city to give the status of parksand open spaces, satisfaction level of users and expectation of the citizens. The methodologyfollowed included statistical analysis of the primary

data collected from the survey zone wiseanalysis of the figures compiled identified the key issues and possible solutions.

URBAN HAPPINESSNS

Introducing Happinesslevel 1

Immediate joy or pleasure, can be distinguished from something more lasting like satisfaction or contentment, Level 2, but both are correlated with each other, a life of contentment is likely filled with many joyful moments, and are both needed to make up the good life, Level 3, a concept of happiness based on the idea that one is fulfilling their potential or purpose in life[1]
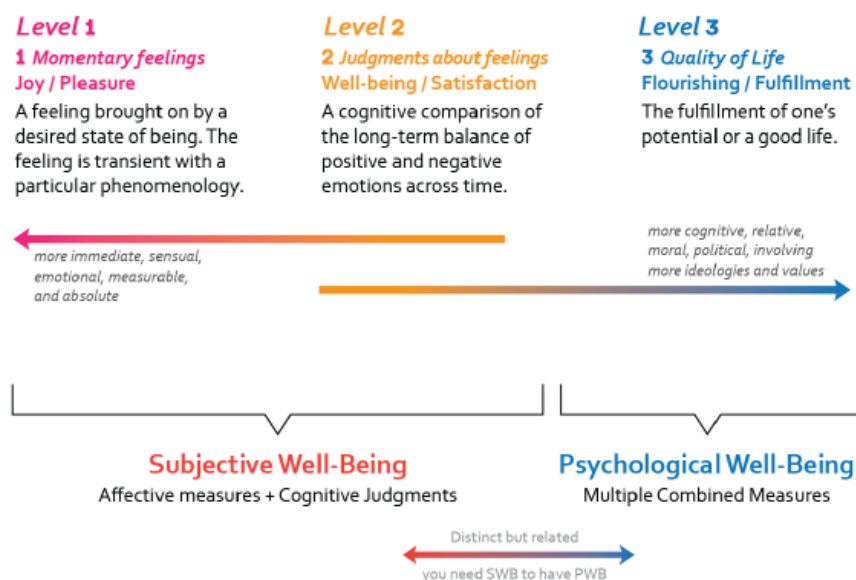

Level 1
1 *Momentary feelings*
Joy / Pleasure
A feeling brought on by a desired state of being. The feeling is transient with a particular phenomenology.

Level 2
2 *Judgments about feelings*
Well-being / Satisfaction
A cognitive comparison of the long-term balance of positive and negative emotions across time.

Level 3
3 *Quality of Life*
Flourishing / Fulfillment
The fulfillment of one's potential or a good life.

more immediate, sensual, emotional, measurable, and absolute

more cognitive, relative, moral, political, involving more ideologies and values

Subjective Well-Being
Affective measures + Cognitive Judgments

Psychological Well-Being
Multiple Combined Measures

Distinct but related
you need SWB to have PWB

Fig. 1 : Defining Happiness. Chart based on Nettle's chart in "Happiness: the science behind your smileImage by Rebecca Habtour

Level 2 Happiness When a person says she has a happy life, she is not claiming to be joyful all the time, but that, upon reflection, the balance of her life is positive over the long term. There are flaws in self-reported measures of happiness. Self-reports of happiness can be driven by one's need to see and portray oneself as a happy person, which might be influenced by culture. Veenhoven argues for the validity of national happiness comparisons noting the happiness reports of migrants aligning with the country of settlement more than their country of origin.[2]. By asking on multiple occasions noting the context, the researcher can come to an fairly reliable overall assessment of a person's general happiness. If a person believes themselves happy, they can synthesize happiness for themselves[3]

1 Nettle, Daniel. Happiness: The Science Behind your Smile. New York: Oxford University Press, 2005.
2 Veenhoven, Ruut. "Cross-national differences in happiness: Cultural measurement bias or effect of culture?" International Journal of Wellbeing.

Level 3 Happiness Aristotle's ideal of the good life, Eudaimonia, is sometimes interpreted to mean 'happiness'. Eudaimonia is a life in which a person flourishes, fulfills their potential. This is not actually a judgement of an emotional state, but instead a judgement of one's life fulfillment, which leaves it open to a variety of interpretations and subjective definitions that can vary broadly between cultures and ideologies.[4] Research seeking this more holistic picture of happiness often rely on indexes which include multiple selected measures of health, well-being, income, autonomy, environmental mastery, self-acceptance, purpose in life, and accomplishment. Psychological Well-Being is the term for these multiple combined measures.
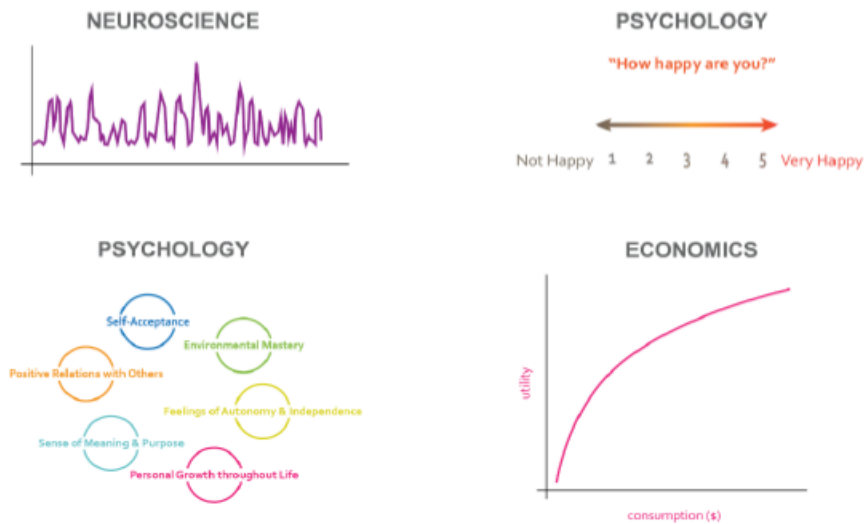
Fig 2 - Four ways to measure happiness. Image by Rebecca Habtour

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3 Gilbert, Dan. "The surprising science of happiness". Filmed [Feb 2004]. TED. Posted [Feb 2004] https://www.ted.com/talks/dan_gilbert_asks_why_are_we_happy.
4 Nettle, Daniel. Happiness: The Science Behind your Smile. New York: Oxford University Press, 2005

Measuring Happiness
Four Approaches
Researches rely on four main approaches for measuring happiness.

1) **Neuroscience** approaches measuring happiness by measuring physiological responses to stimuli: this can be in the form of an MRI scan, an EEG helmet, measuring cortisol levels in the blood, among other measures.

2) **Psychology** often measures immediate happiness by survey. Directly asking a person if they are happy has been verified by neuroscientific studies as a pretty reliable measure of immediate happiness.

3) **Psychology** also seeks to measure a person's overall sense of fulfillment and happiness in life by survey. People are asked to reflect on their lives generally and report on their overall sense of happiness and are also asked about other 40 things considered conducive to happiness. Those questions generally relate in some way to the researcher Ryff's list for Eudaimonia, which looks past momentary happiness, and a generally pleasant life into qualities that can be gained by "challenged thriving". Sometimes a little heroic struggle can be good for you.

4) **Economics** will often equate happiness to utility, operating on the assumption that the more people get what they want the happier they will be. The concept of utility is drawn from Jeremy Bentham, classical economist, hypothesized that people make life choices that satisfy their happiness, which he called utility.

Maslow's psychological needs, is the particular significance of positive relationships and social connections.
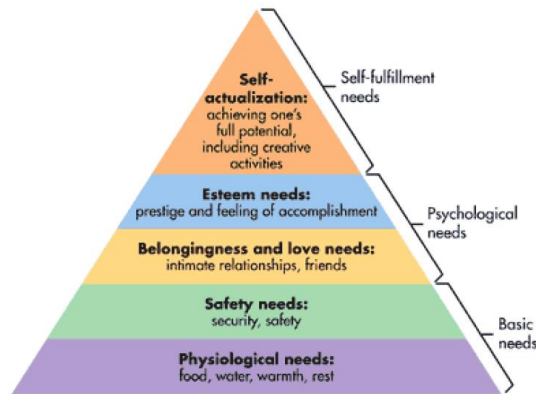

Fig. 3Maslow's hierarchy of need. Digital image. Teachnology. Accessed November 2015. http://www.teach-nology.com/tutorials/teaching/whatareneeds.html.

2. ROLE OF PARKS AND OPEN SPACE

Parks constitute a vital part of public life and are often referred to as the lungs of an area. Attractive, safe and accessible parks and green spaces deliver social, economic and environmental benefits in addition to improving public health and wellbeing. They make important contributions to our overall quality of life. Nagpur's parks are public open spaces where communities interact and enjoy themselves and hence are the major

Open space is the publicly owned land that is set aside primarily for recreation, nature conservation, passive outdoor enjoyment and public gatherings. This includes public parks, gardens, reserves, waterways, publicly owned forecourts and squares. At the same time, parks provide many specific facilities for groups – sports players, children and careers, event organizers, nature conservationists and many others. Underpinning this, and of special importance in an inner-city area like Nagpur, is the pure pleasure of being able to enjoy quiet green open space.

3. CASE STUDY: NAGPUR CITY MAHARASHTRA, INDIA

The study area, Nagpur, the best city to live in India, incidentally, also beats to the rhythm of India's heart because of its geographical location. Nagpur is popular for its oranges and has been declared as the "Tiger Capital of India." As per the ABP News Best City Awards Research in March 2013, Nagpur is India's most Livable City with the Best Public Transport, the Best Green City and the Best City for Health Care Services. Currently city is witnessing an economic boom in recent years and boom in IT sector. Nagpur's relatively clean environment, well developed infrastructure, connectivity, etc. is helping the accelerated development. It is appropriate to and worthy of being the 'Gateway to the Central Indian Forests'. Climate of the city in general is semi-arid with uni-modal monsoon. The average annual rainfall (based on 30 years data) is about 1161.5 mm. The winter (November to February) in general is mild.

3.1Existing Scenario of parks and open spaces and Issues with Related Regulation:

As per the findings, Major Exploitation on Parks/ Open Spaces, Play Fields from Different Zones in Nagpur city, Due to different Incongruous usage from society as well as the casual approach from local authority.

Incongruous usage in terms of Parking, unauthorized structure, dumping garbage, animals fouling, anti-social behavior, low maintenance etc. The maximum % of exploitation have been seen in zone 5 i.e. 41% and zone 9 i.e. 44%.(In other zone the exploitation viz.- Z1-21%,Z2-33%,Z4- 27%,Z6-22%,Z7-21%, Z8-33%,Z10-28%)

Fig:4 comparative analysis of current scenario of exploitation of park and open spaces zonewise.

1. Usage:

The public at large are known to dump garbage and debris, litter, urinates etc. on the Open Spaces.

13.6.5 (b)DCR States that : structures used for the purpose of pavilion or gymnasia or club house or vipasana and yoga center and other structures for the purpose of sports and recreation activity like all indoor sports may be permitted

***Issue* :** At one large open space (Z5-Nandanvan) the number of structures is constructed where in the said regulation DCR, given provision is only for recreational activity but police station &schools were constructed which create obstacle to users.

Fig 5 - 13.6.5 g) Garbage dumping area within plots.

***Issue* :** Slums which are nearer to open space they are using some part of it as dumping area, and the corners of open space also used as dumping.

Fig. 6 13.6.5 h) Parking, either temporary or permanent shall not be permitted

***Issue* :** open spaces are being exploited because of unauthorized parking.

Fig.- 7 There are many open sites which is reserved as open space in DP but most of them are not in use mainly The sites are used for dumping of garbage.

Fig. 6 Public Safety and Security:
Wells, water tank, feeling unsafe, Absence of footpaths. Broken and rusted children's play equipment..

- Women have specifically expressed their insecurity perceived while walking/jogging on the trackslocated along the internal edges of Open Spaces defined by solid boundary walls.
- Girls are not interested to go to play field because of antisocial behavior.
- Absence of footpaths. In several cases, there are no footpaths between Open Spaces and their access and roads. This creates problems to senior citizens, children and the physically challenged when alighting from/boarding vehicles.
Issue: **there is NO Regulation for** Public Safety and Security.

4. **POLICY AND Guidelines Provision**

Aligning the needs and aspirations of residents and open space users, polices in Nagpur and Maharashtra and priorities is a major challenge when improving open space.After critically analyzing the key issues in each zone, strength, weakness, opportunities and threats have been identified and basing in which the following policies and proposals have been implemented.

4 .1. Area and number of open spaces

a) **Core Area** : **Protecting existing open space**

- The number of open spaces and their cumulative area in core or central part of the city is very less when compared to the other parts and the land acquisition has very less scope, hence the protecting and conservation of the existing open spaces against encroachment has to be done.
- The slums which have encroached the existing open space are to be rehabilitated for the development of open spaces.
- The playgrounds belonging to schools can be taken for lease by the authorities for users other than the school children

b) **Established Suburbs: Providing more open spaces, play spaces**

- Seek further provision and enhancement of, open space and other facilities, such as children's play areas through the application of policies with development plans and changes in the development plans and public utilities laws

4.2 Accessibility: for all

- Improve informational, interpretive and directional signage across the city parks and open spaces with an attractive and consistent format
- Investigate opportunities for public access to private open spaces.
- Ensure all open spaces, especially play areas are compliant in terms of access for those with disabilities

4.3 Facilities: Renew and Redesign

- The ratings for all the facilities for different kinds of activities are very low both quantitatively and qualitatively.
- Facilities that are provided should take into consideration the climatic conditions of the city there by providing proper drinking water and protective shades. Coordinate

the provision of disabled parking facilities with the availability of accessible facilities including good paths, a mix of seating, play facilities, toilets and cafes.
- Lighting is deficient in many of the City's parks and open spaces with some exceptions. This should be tempered with the need to avoid nuisance from excessive light, or the problem of attracting antisocial behavior.
- Toilet provision is very poor. The provision of accessible toilets in parks is particularly important in encouraging family visits.

4.4 Maintenance: Improving the standard
- Enhance and improve open spaces across the network particularly where there is an identified deficiency of provision or quality.
- The best way to ensure that ongoing maintenance does not become overly burdensome is to consider and plan for maintenance needs from the onset. Spend a little extra money up front for quality materials that will hold up and save money over the long-term

4.5 Exploitation
- Parking is a major issue which is affecting the usage of the open space. 35 no. of parks and open spaces do not have any demarcation thereby encouraging the illegal parking: local authorities should take necessary steps such as proper demarcation, imposing fines, signage's highlighted with warnings.
- Community awareness should be given importance to curb the exploitation such as dumping of garbage.
- Develop policy and advice for residents wishing to hold community events in their localpark or open space.

4.6 Usage: Conflict should be neutralized
- Specific usage of open space should be emphasized such that the purpose of creating that open space in that location is clearly served.
- Provision of another open space which is the cause of the conflict at the neighborhoods or the community level.

4.7 Safe, secure and attractive
- Good lighting, setting back vegetation away from pathways (to avoid the sense of lurking muggers), keeping activity areas open to view from adjacent roads and residential areas, planning roads to allow controlled access, providing curbs and separation of paths from roads, and using fencing and warning signs to keep users away from hazards are measures that can improve park safety.
- Promote the Nagpur's parks and open spaces through a variety of media, including the internet, brochures, posters and signs, to make residents aware of opportunities for recreation in the Nagpur.

4.8 Revenue generation
- Identification of the open spaces which are capable generating revenue and making policies for its utilization different fund-raising activities and see that the fund raised goes to the account of Garden Department.
- Employing different fund-raising models as suitable to the respective open space

4.9 Actively involving the community in their local open spaces.
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4.10 Need for an act to measure urban happiness in the city:
From the existing scenario, the regulation have been not followed by the citizens and as well as the local authority, because of which parks, open spaces and playfield getting ruin in condition and this is very bad picture for Nagpur city as we calling as 'Green city' and ' The Best City'.

5. CONCLUSION:

as per the current situation of the Nagpur city there is lack of urban happiness because urban spaces like parks and open spaces which are really need to be taken care for good health and happiness of the citizen those spaces are exploited in many ways as per field survey and observations, so the future scope of this research also be focusing on the design module for transformation of parks and open spaces for a larger community to enhance the Urban happiness within the city level through architecture and urban design and urban Planning.

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