FROM SITE TO REGION

Traditionally, the ‘site’ was principal spatial category and unit of observation in archaeology. Reasons for this were to be looked in several ways:

- methods of data retrieval – excavation and topography – were site-based or site oriented. It was possible to excavate only certain locations or parts of locations, while topography was principally considered as a mean of discovering sites suitable for excavations (those with good stratigraphy, clear and long chronology, and potentially with well preserved finds).

It was assumed that locations (sites) with long and intensive occupation are having better information potential for reconstruction of human past. In this sense, the site became a sort of CENTROID – a point with larger specific weight or significance for which it has been assumed that represents the best (among all other ‘points’ in space) the regional system as a whole (Wagstaff 1991, 9).

However, anthropological and ecological perspectives in archaeology required different understanding and conceptualization of the space – not presented or conceived only as system of points. Culture could not be represented correctly only with those forms of behaviour typical and recoverable at individual locations, be it settlements, cemeteries, sanctuaries or any other ‘point’. At these locales only certain components of culture are manifested but not all.

The only spatial frame of reference which could answer the requirements of systematic study of culture, and could be logistically still mastered was region. We can not expect that site (one or more) manifest all components of larger cultural systems. Research must be planned so to take into account all types of sites on which different components of cultural systems appear (see Judge, Ebert in Hitchcock 1975, 83).
Regional perspective was, of course not something new to archaeology. In fact, much of the American settlement archaeology and New archaeology applied regional concepts of observation:

G. Willey in his ‘settlement pattern’ concept clearly stated that settlement patterns can be essentially distinguished only on regional level. While New archaeology argued that only at the regional level one can hope to get fuller/complete archaeological record of a cultural system. (Binford 1964).

In European archaeology the regional perspective also has long tradition which goes back to early field archaeology in the period of pre-scientific archaeology. In the first half of the 20th century two major regional approaches are known amongst European archaeologies:
- Archaeological topography as conceived by German archaeologists (Archäologische Landesaufnahme),
- the concept of regional (partly landscape oriented) approach of C. Fox in British archaeology (The Archaeology of the Cambridge Region (1923) na sodoben način utemeljil regijo kot temeljno enoto opazovanja.

However, inspite of clear and widely accepted understanding that human culture and behaviour is far too complex to be adequately represented at selected locations, the archaeology simply was not able to develop suitable field methods to meet this challenge. The everyday practice of archaeology was pushing it back to individual sites.
The problem was becoming larger through time. Aerial archaeology, already in its early days before the WW2 has continually demonstrating the importance of systematic observation of larger spatial units, and that individual monuments and sites can be explained properly only in the context of their cultural landscapes.

Similar ideas were coming from complex and extensive excavations in which the answers to the questions of site ecology, geomorphology and functional interpretations answers had to be look for outside the excavated sites.

Additional motiv for the development of new methods was coming from anthropology. A number of studies clearly demonstrated that many traditional communities didn’t have ‘point image’ or representation of the space around them and in which they lived. Instead, the landscape they understood as a sort of continuum.
Answering the challenge

By radical conceptual change and transformation of traditional concept of archaeological topography new technique was designed – SYSTEMATIC SURFACE SURVEY (SSS)

Many experts in this field saw the introduction of SSS as the principle mover which largely opened horizons of archaeological investigation. In many respects. The changes were so great that they were impossible to predict in the early days of SSS. G. Barker (1986) sees in SSS the major step towards the disciplinary lost innocence as this was presented by D. Clarke in 1973.

SSS as an archaeological observation can be listed between excavations and aerial reconnaissance. It enables the observation of larger spatial units (as the aerial archaeology) but it also enables direct physical contact with finds and sites. It gives first hand information about the artefacts. Major difference compared to the traditional techniques of archaeological topography lies in much greater quality of generalization of SSS. And it is in this very field where major changes and improvements happened.
Though one can see the SSS as a sort of cumulative improvement of the traditional topographic approaches. It is true that the Archaeologische Landesaufnahme in its theoretical texts contains several elements of what will later develop into SSS, but it is in the period from the late 60s to early 80s when SSS developed its genuine theoretical and methodological foundations in anglo-american archaeology.

SSS did not develop in a single archaeological school but it is better to say that its development is a result of a convergence of several methods and techniques and circumstances in the field work.

First steps toward the SSS can be seen in several different projects in different parts of world: South Etruria Project (British School at Rome), among some American archaeologists in Mesopotamia (Adams), and in Prehistoric Messenia Project by the Unuiversiotion of Minnesotta team, to name just the major ones.

Though their research agendas differed very much they all had one major common feature – their observations moved from the ‘big/great’ sites and monuments to observing those less attractive but much more numerous forms of archaeological record which reflected much better the lives of greater population (the other component of culture). And one had to cope with large numbers of finds and make sense of these figures.
American New archaeology:

SSS was developed in concordance with new epistemology which required more objective observations, clear presentation of method used and of their range and quality and relevance for subsequent generalizations. The New archaeologists assumed the existence of universal regularities in human behaviour, and they have tried to developed archaeological methods and techniques for finding these regularities in different sorts of archaeological record (and in surface record as well). See more in Binford (1964); Johnson (1977); Plog S., Plog F. in Wait (1978); Schiffer, Sullivan in Klinger (1978).

Two major concepts applied in SSS developed in this respect:
- research design (explicuit and systematic definition of the research problem, of methods used, of the range of methods, of generalization potential etc.)
- sampling strategy (units of observation, what is observed/collected, ratio between observed space and total space, selection of samples, sample size...).
South Etruria Project
Initial idea of the project designed in 50s and early 60s was mapping of the Etruscan roads and settlements in Lazio (in a traditional topographic manner). However, in the field they were faced with extremely high numbers of artefacts across the landscape which were brought to surface by extensive ploughing (FAO project, agricultural modernization and introduction of mechanized agriculture).

The quantity of finds on surface (and their information potential) was so high that no known archaeological technique could be used for their appropriate study. And these landscapes (together with the archaeological record) were extremely endangered by further mechanized agriculture. (Potter 1979, xiii).

John Ward-Perkins, Director of the British School at Rome faced this challenge by organizing a research project on territory between Rome and Veii which systematically recorded all kinds of archaeological record encountered. Extremely high quantities of finds required different ways of observation and recording, and as major challenge proved to be surface scatters which in most of the cases were the only form of archaeological indication of sites and human activities. In more than 20 years of the project, in an area of approximately 2000 square km more than 1000 sites were discovered, and most of them were in the form of surface scatters (Potter 1979, xiii).
South Etruria project: sites recorded.
Circumstances in Mesopotamia were to some extent similar to that in Lazio. Also in Mesopotamian archaeology existed a long tradition of excavations of major towns and monumental architectures and similar structures. However, with the introduction of the ideas and concepts developed in settlement archaeology, and with the questions of demography and social and economic organization of Mesopotamian ancient societies, some archaeologists turned their eye from clay cities to countryside and to less monumental sites. Also here, they soon realized that much of the ephemeral sites are preserved mostly in the form of artefact scatters on surface (Adams 1965; 1966; Adams in Nissen 1972; Hole 1980). Only that here their quantities were even larger than in Lazio.

R. McC. Adams, one of the pioneers soon realized the potential of surface record and of methods of its recording. He was able to develop new approach in studying Mesopotamian ancient settlement organized around 4 major aspects: (see in Hole 1980, 24):
- recognition of settlement patterns
- revealing the regularities in settlement behaviour with locational and spatial analyses
- accurate mapping of physical geography and studying cultural elements against them
- reconstruction of subsistence, demography and other socio-economic aspects of societies and their changes in a given landscape.
MESSENIA

Also the project of the Minnesota University developed similarly and due to relatively similar conditions as in Lazio (McDonald in Rapp 1972). Initial plan of the project (1959 - 1969) was reconstruction of regional settlement patterns (*habitation patterns* as they have termed them) from Neolithic to Roman period in Messenia. They planned a sort of expensive archaeological topography (not very different from traditional topography). They have also included aerial surveys, study of geomorphology and some surface collections.

In the early stages of the projects the surface scatters were considered only as indicators of sites but soon they have realized that fluctuation in distribution and density of scatters can offer much more for understanding of regional settlement processes.

This project actually served as a sort of raw model for many SSS projects in Mediterranean.
In the period 1975-1990 there was a genuine ‘explosion’ of a number of SSS throughout the world. In the Mediterranean countries only (mostly in Italy and Greece) in the period between 1975 and 1995 there were more than 1000 SSS projects organized. We can hardly find any other archaeological technique being so successfully and widely applied in such a short time. The reasons for this are not only in simplicity and high cost effectiveness of the SSS but, more importantly, the SSS were able to provide empirical data required for a series of new demographic, economic and historical ways of interpreting archaeological record. As one of the principal achievements of the SSS methodology many archaeologists (i.e. Barker 1986, 21; 1991, 1; Cambi in Terrenato 1994, 285-5; Bintliff 1990; Vallat 1987, 1989) see in its potential of combining with Braudelian historiography.
MAJOR CONCEPTUAL AND METHODOLOGICAL ADVANCES OF SSS

- Landscape oriented approach
- Introduction and study of the nature of surface archaeological record
- Concept of off-site archaeology
- Theory and methods of sampling strategies
LANDSCAPE-ORIENTED APPROACH

SSS is not aimed only at looking for single sites (site-oriented approach) as it is the case with traditional archaeological topography but it can serve as excellent methodology for looking at ‘total’ archaeological record regardless of its concentrations on certain localities (i.e. Sites).

In general, in the research strategy of SSS it is the landscape which is observed and which may contain several kinds of archaeological record (one being a site or locale with higher concentration of finds).

This change was not only due to changes in archaeological theory but it had strong empirical support. Most SSS regional and micro-regional projects demonstrated that what we are actually dealing with was more or less continuous distribution of artifacts across the landscapes, and that there are almost no artefact empty spaces and that sites were only locales with relatively higher density of artefacts.

This was the principal empirical base for reconsideration of the role and concept of landscape in archaeology – the landscape as an artefact itself.
SURFACE ARCHAEOLOGICAL RECORD

One of the principal contribution to archaeological epistemology was careful and detailed study of the nature and role of surface archaeological record.

The major problem of surface archaeological record aspect is its relationship with the forms of archaeological record revealed in excavations. (i.e. stratified archaeological record).

Traditionally, the surface archaeological record was to a certain degree equalled with the stratified one, frequently assuming that surface record reflects most or at least upper (the latest) chrono-stratigraphic layers of the sites. In this sense archaeological topography was used to select sites worth excavating due to their presumed higher information potential (Chapman 1989, 4).

The new theory of surface archaeological record is based on the notion of human behaviour which is organized as a series of repeating regularities and patterns which must have also their material reflection in the organization and structure of finds appearing on the surface. It was only the matter of developing the tools for revealing this regularities in archaeological record. And for correlating the forms of archaeological record with kinds of human behaviour.

Null hypotheses = there is no correlation between organization and structure of surface archaeological record and kinds (activities) of human behaviour was successfully rejected. Geographic and anthropological analogies can serve as primary frame of reference for interpretation of structure and logic of surface distributions (Schofield 1991a, 4, 6).
Theoretical models of surface pottery distributions in agricultural communities (Hayes 1991) on regional and micro-regional levels.
VISIBILITY (visibility or recognition of artefacts)
One of the key aspects in SSS methodology and practice.

Three major questions:
1. What has been preserved on the surface?
2. What can be seen on the surface in given conditions?
3. What has been effectively detected and recorded in a given case?

Principal factors influencing visibility

Circumstances in the field:
- surface visibility (openess)
- types processes of ‘bringing up’ the artifacts (ploughing)
- light

Artefact types:
- size
- material,
- differential preservation
- diagnostic artefacts

Personal skills/knowledge of fieldwalkers
- experience
- ‘adjusting’ eye
J. Cherry, J. .Davis in E. Mantzourani (1991, 37-54) in their SSS project in the island of Kea, Greece very carefully observed the relationship between detected types of sites and visibility conditions. They have discovered statistically significant trend towards the interpretation the scatters of artefacts as sites on those areas with better visibility. In other words, unproportionally more sites were discovered on the grounds with better visibility while the scatters in worse visibility conditions were more frequently interpreted as off-site scatters.

RELATIVE ARCHAEOLOGICAL VISIBILITY
Better ‘visibility’ of certain periods or activities, and of diagnostic finds (Rutter 1983, Cherry 1983, 400). In multi-period SSS certain periods are more difficult to detect due to lower number (or even absence) of diagnostic artefact though other (less diagnostic) artefacts from the same periods appear in larger quantities.

Rutter (1983, 138) made a table of relative archaeological visibility for S Greece for neolithic and Bronze Age pottery where Final neolithic, Early Helladic I and III, Late Helladic I and II and Submycenean periods had distinctively low relative visibility because of the absence of diagnostic types and were therefore underestimated in total image of prehistoric settlement in this area.
Similar analysis was done by M. Millet (1991) in the context of his SSS of Ager taraconensis in Spain. Differential quantities of luxurious pottery he interpreted not as fluctuations in number of sites but as fluctuations in economic power of settlement and in patterns of provision of such pottery.

Fig. 4. Histograms showing the distribution of numbers of fields in the *Ager Tarracensis* survey 1987 with different quantities of pottery per hectare. The values of the median, upper quartile and upper octile are plotted from Table 2.
OFF-SITE ARCHAEOLOGY

Based on theoretical consideration of surface archaeological record and to a great extent also on empirical experiences in filedwork a concept of off-site archaeology was developed and applied in interpretation of landscapes.

In general, off-site archaeology is dealing with those artefact scatters which appear outside the ‘sites’ (areas with larger relative density of finds). Off-site and on-site distributions are, as a matter of fact, two extreme poles in continual distribution of artefacts across the landscape. The threshold between on-site and off-site is always relative regarding the concentrations defined as background values. This relationship must be defined for each region and period separately.

Foley (1981), one of the pioneers in this field associate the off-site archaeology with two kinds of processes:
- with behavioural processes of people in the past (selective allocation and deposition of artefacts across the space)
- with geomorphological processes (postdepositional processes)

Surface record reflects the activities of both kinds of processes which frequently cannot be clearly distinguished between themselves. For this reason it is important to include the study of taphonomy in order to get better understanding of the surface record and its information reliability.
6.3. Sequence of destruction of settlement: (a) situation at discard; (b) loss of associated structures; (c) loss of distributional information.

6.4. ‘Typical’ process of information loss in the archaeological record.
Similar problems were also the topic of the study of Bintliff and Snodgrass (1988) who offered several models for explaining the off-site distributions (off-site landscape).

They have compared the site and off-site values across the Europe, mediterranean and in S Arabia. In the site of Sohar (Oman) the value of background (off-site) was between 100-1000 sherds per 100m2. while the sites reached the densities up to 4000 sherds per 100m2. In the case of Tell Swyhat (Syria) the off-site values were between 20-40 sherds, in Beotia (Greece) and in S Italy 0,4 – 1 sherd (the sites had concentrations of 50 sherds per 100m2) while in Roman Britain the sites contained up to 0,5 sherd per 100m2, and background 0,005-0,5 sherds.

They similarly emphasized the role of geomorphological processes and rejected the so called ‘folklor’ model of artefact loss. For them the reasons for off-site appearance of artefacts has to be associated with certain activities in the landscape with less intensive deposition of artefacts:
- locales of dump
- locales of primary procession of artefacts
- manuring (manure first collected/accumulated on dump sites, and later spread in the fields).

See also study of P. Hayes (1991) in which the author is looking primarily for cultural processes responsible for off-site distributions.
SAMPLING

One of the reasons for successful application of SSS was well considered sampling which enabled high potential for generalizations on various spatial levels.

Though one of the aims of sampling is making the data retrieval as efficient as possible, the development of different sampling strategies in SSS catalysed also a series of discussions on nature and range of surface archaeological record for representative generalizations.

Two major books on sampling (Mueller 1975; Cherry, Gamble and Shennan 1978) Have set out particularly the importance of regional scale of research where the representativeness can be the highest.

The earliest explicit sampling strategies on regional level appeared in 1950s in the Viru valley project and in the project Lower Mississippi Alluvial Valley Phillipsa by Ford and Griffin. Important contribution to the introduction of statistic and other quantititative methods was also given by Albert Spaulding (Statistical techniques for the discovery of artifact types, 1953)
SIZE OF SAMPLE:

If we want to sample human behaviour as it is reflected in the distribution of artefacts across the space, we must then first define the behaviour to be studied since there are different forms of spatial behaviour regarding the scale and level.

Sampling strategy must carefully define the relationship between studied and sampled populations from which generalizations are extrapolated. The type of human behaviour to a great extent defines the spatial frame or level of observation.

Traditional sampling was to a great extent intuitive or judgemental (based on prior knowledge of archaeology). New sampling strategies did not reject those, intuitive concept, but treated them more realistically.
Comparison between the two sampling strategies has shown that none of them has any considerable advantage.

Statistically random sampling assures full neutrality in selection of sampling units, but the result can be uneven coverage of the space (Teotihuacan problem). On the other hand it is not always possible to have systematic coverage, especially when dealing larger spatial units, and systematic sampling could be less appropriate for discovering quantitative relationships between the sample and a whole. (Whallon 1983, 74).

How much of the field should be sampled? It depends on what we are looking at, however in practice a sample of 10-20% was enough on regional level. This seems to be a reasonable compromise between logistics and quality of generalizations.

J. Bintliff (1992, 113-118) have tried on basis of historic demographica data for Beotia in 4th century B.C. to calculate the relative loss of sites due to sampling strategies and destructive processes. For rural sites from the Classical period the figure was 43%, for the Midde Bronze Age 56%, for the Early Bronze Age 67% za zgodnjo bronasto dobo, for the Early Neolithic 81%, 89% for the Mesolithic. In Chaco Canyon Project (SW USA) the relevancy of 10% sample was also tested. The results have shown that maximum 6% of sites were missed (Barker 1991, 4).
STRATIFIED SAMPLING

In cases of heterogenous landscapes made of different ecosystemic and morphological units the sample needs to be stratified since the preservation and visibility of the surface archaeological record could differ considerably.

In such cases the heterogenous territory under observation is divided into a series of homogenous units and for each unit individual sampling strategy is planned (Read 1975, 58-59; Judge, Ebert in Hitchcock 1975, 87-89).
MULTI-STAGE SURVEY

J. Cherry (1983, 399) - *uncertainty principle*: “Sites, quite simply, are not the static entities that excavation has perhaps encouraged us to imagine.”

Surface archaeological record is not fixed but it can considerable change through time (postdepositional processes, preservation rate, decay of materials, visibility conditions...). In this sense the record on the surface is not final. It does not appear in the same form or structure and neither in the same place.

In order to avoid potential misleading information a multi-stage survey can be applied. (Schiffer, Sullivan in Klinger 1978, 17-18).
INTERPRETATION OF SSS

We must always be aware of the fact that surface record is composed of smaller, fragmented and moveable objects, coming from stratified contexts. The record is actually transformed projection of 3D stratified record on 2 planes where original stratigraphic relationships and contexts are absent. Potential chronology can be revealed only in analysis of artefacts.

In this sense the interpretation contains diachronic as well as synchronic perspective.

Basic context of interpretation of surface record is distribution where quantitative and qualitative aspects of its structure are studied.
Major features of distributions of surface record are different densities/concentrations of artefacts per spatial unit. The interpretation of such densities (‘sites’) derives from functional and chronological aspects of finds and groups of finds. And even areas with almost no finds could serve as a sort of argument ‘ex absentio’.

(Cherry and Gamble 1978, 22) 4 parameters are primarily looked in distributions:

a) number of sites in inspected area

b) Number of sites in individual periods and according to the functiona types of sites

c) Relationship between sites and natural environment

d) Relationship between sites
J. Cherry (1983, 391,410) has shown that the density of sites in Greece discovered with SSS (5 fieldwalkers, 5-15m apart) is 70 times larger than the density revealed by traditional topographic methods. This simply opened a series of new horizons of archaeological enquiry.

Not only large number of new sites appeared but also appeared numerous sites that would escape traditional topography: more ephemeral suites, smaller sites, less monumental sites, small villages, workshops, stables... In Greece (Beotia, Nemea, Kea, Melos) in SSS more than 70% of all discovered sites falls into this category (smaller than 1 ha), and with more resoulte sampling their share is becoming even greater (Cherry, Davis and Mantzourani 1991, 18-19; fig. 2.3).

“A principal attraction of archaeological data is that unlike written records everybody created them everywhere – rich and poor, literate and illiterate, Roman and barbarian, in town and country. It has been well said that, whilst archaeology can be used to study the rich and the famous (and the Great tradition of classical art, architecture and urban topography has devoted its efforts principally to the fine monuments they created), an even greater strength is that it can investigate the livers not just of those who made (and largely wrote) history but of the silent majority as well.« Barker g., 1991, 1